Drug & Cosmetic INDUSTRY

MAY, 1950

FEATURE ARTICLES • •

NEW DRUGS FOR TUBERCULOSIS PART I	Milton A. Lesser	514
COSMETIC ALLERGIES	Rita C. Parsil and Francis M. Whitacre	516
AMPOULE INSPECTION	William James Giese and H. E. Sagen	518
YOU THINK IT'S EASY!		519
ADMA—BOCA RATON—1950		520
SOLIDIFIED FRAGRANCES	Harry Hilfer	522
MANUFACTURE OF TABLETS PART III	Ronald Clarkson	524
THE ARTHRITIS DRUG FRENZY		527
ADVERTISING PHARMACEUTICALS	Albert J. Weisbrodt	528

DEPARTMENTS • •

KEEPING POSTED	Thomas R. Farrell	509
PACKAGING AND SELLING	Frazer V. Sinclair	531
NEW PRODUCTS AND NEW PACKAGES	Frank Child III	537
NEWS	Frank Child III	543
MANAGEMENT FORUM	Francis Chilson	555
PATENT THOUGHTS AND TRENDS	Thomas Cifelli, Jr.	564
INDUSTRY'S BOOKS	Harry G. Kelbly	567
YOUR TRADE-MARK RECORD	John H. Graham	572
COMPOUNDER'S CORNER	Milton A. Lesser	576
ADVANCING THERAPY	Milton A. Lesser	580
PERFUMER'S SHELF	Milton A. Lesser	584
ABREAST OF THE MARKETS	Frank Child III	587

THOMAS R. FARRELL, Editor
FRANCIS CHILSON, Production Consultant
MILTON A. LESSER, Technical Editor
HARRY G. KELBLY, Raw Material Editor
FRANK CHILD III, News Editor
HILDA C. McCOLLOM, Art Director

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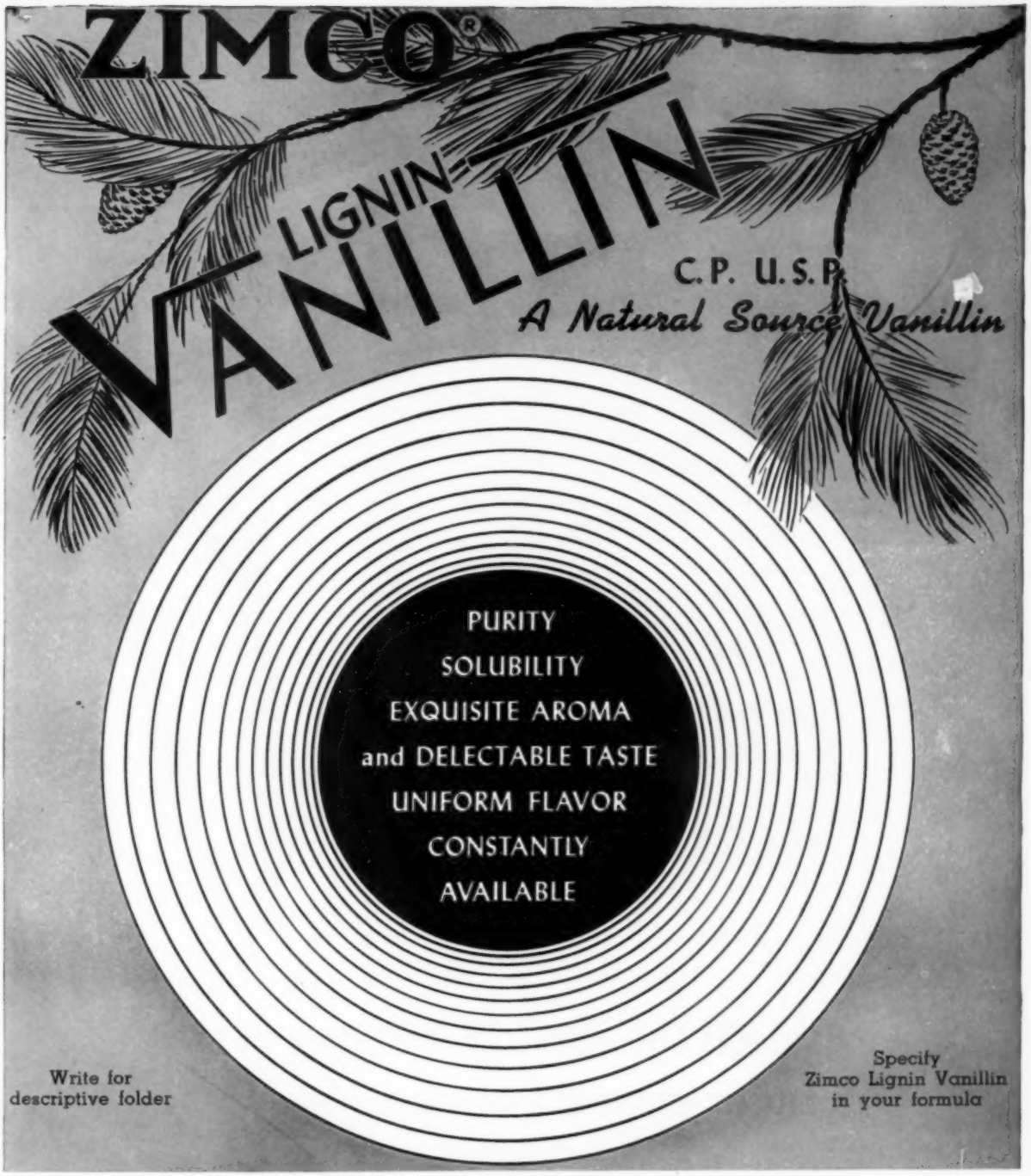

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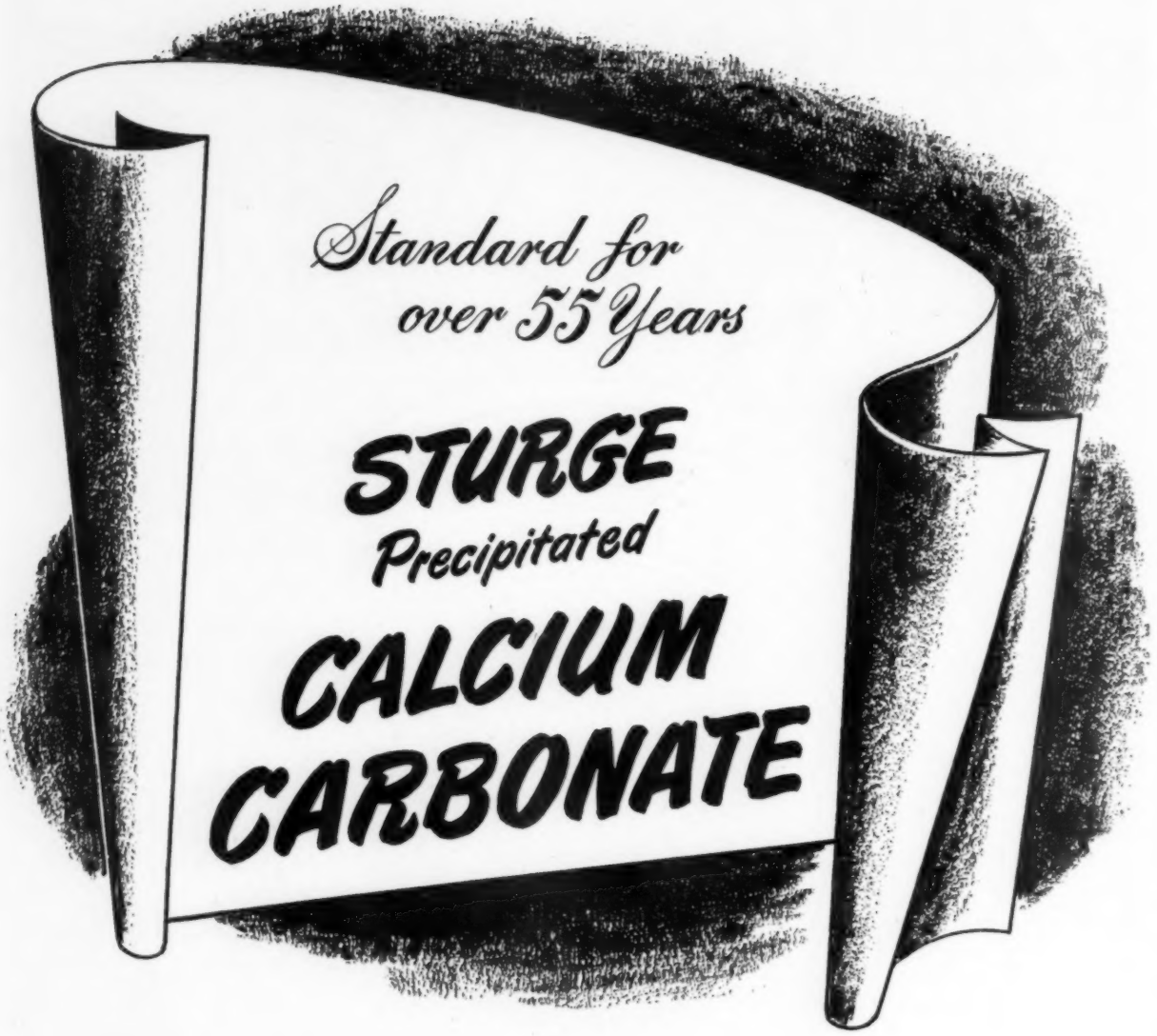

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it can't happen with "cash-

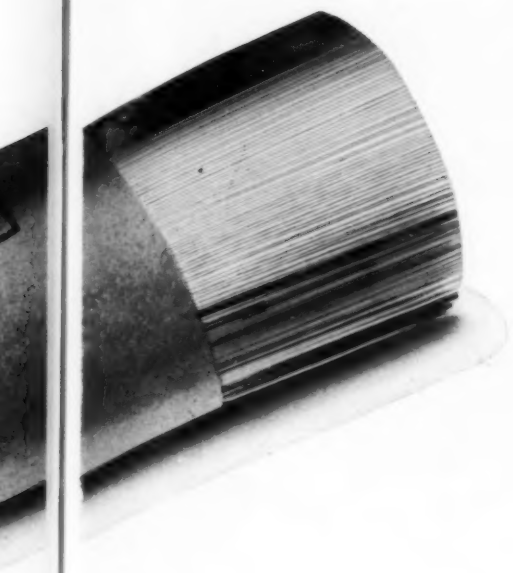
America's Ten Largest Magazines of Audited Circulation • Publishers' Statements for Last Six Months of 1949

CIRCULATION	MAGAZINE	CASH-AND-CARRY CIRCULATION (SINGLE COPY SALES) 1,000,000 2,000,000 3,000,000 4,000,000
5,305,394	Life	
4,429,260	Ladies' Home Journal	
4,010,219	Saturday Evening Post	
4,000,156	Woman's Home Companion	
3,937,386	McCall's	
3,458,080	WOMAN'S DAY	
3,291,829	Better Homes and Gardens	
3,140,371	Collier's	
3,110,040	Look	
3,080,493	Good Housekeeping	

Why are single copy sales the cream of magazine circulation?

Because they are buyer-initiated. Because no premiums or pressures, no song-and-dance, no special inducements bring the sales in. The single copy sale reflects the reader's desire to buy, rather than the publisher's desire to sell.

the greatest cash-and-carry circulation



An unopened magazine can't whip up much enthusiasm for the products between its covers. And there are plenty of unopened magazines—plenty of Annies who don't live there any more. That's just one example of the waste circulation in subscription figures.

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The customer who's up and around, eager to buy and read, is a far more promising prospect than Annie . . . who isn't reading in December what she subscribed to in May.

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and-carry circulation"

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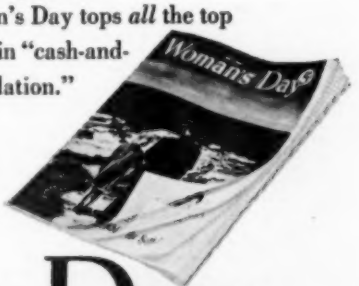

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Cloud Point °F	38° - 42°	46°- 49°	63° - 71°
Color Lovibond 1" Red	4 - 7	4 - 7	4 - 7
Color Lovibond 1" Yellow	20 - 40	20 - 40	20 - 40
Unsaponifiable Per Cent	2.0- 3.0	2.0- 3.0	1.5 - 2.5
Saponification Value	196 -199	196 -199	197 - 200
Acid Value	195 -198	195 -198	196 - 199
%F.F.A. as Oleic Acid	98 - 99.5	98 - 99.5	98.5-100.0
Iodine Value	90 - 93	88 - 91	80 - 85

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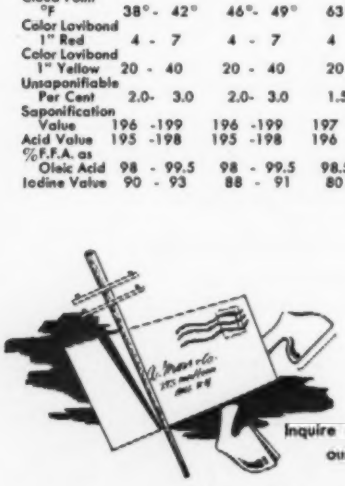

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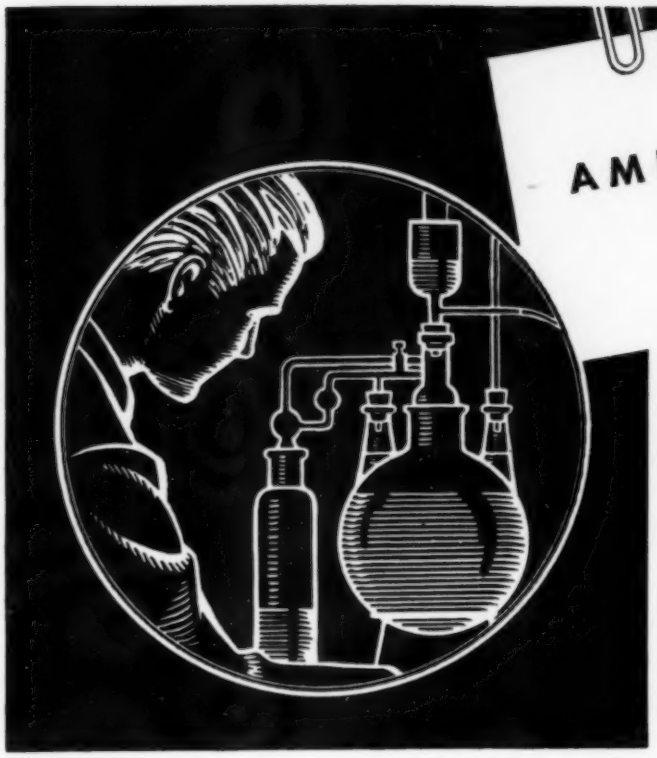

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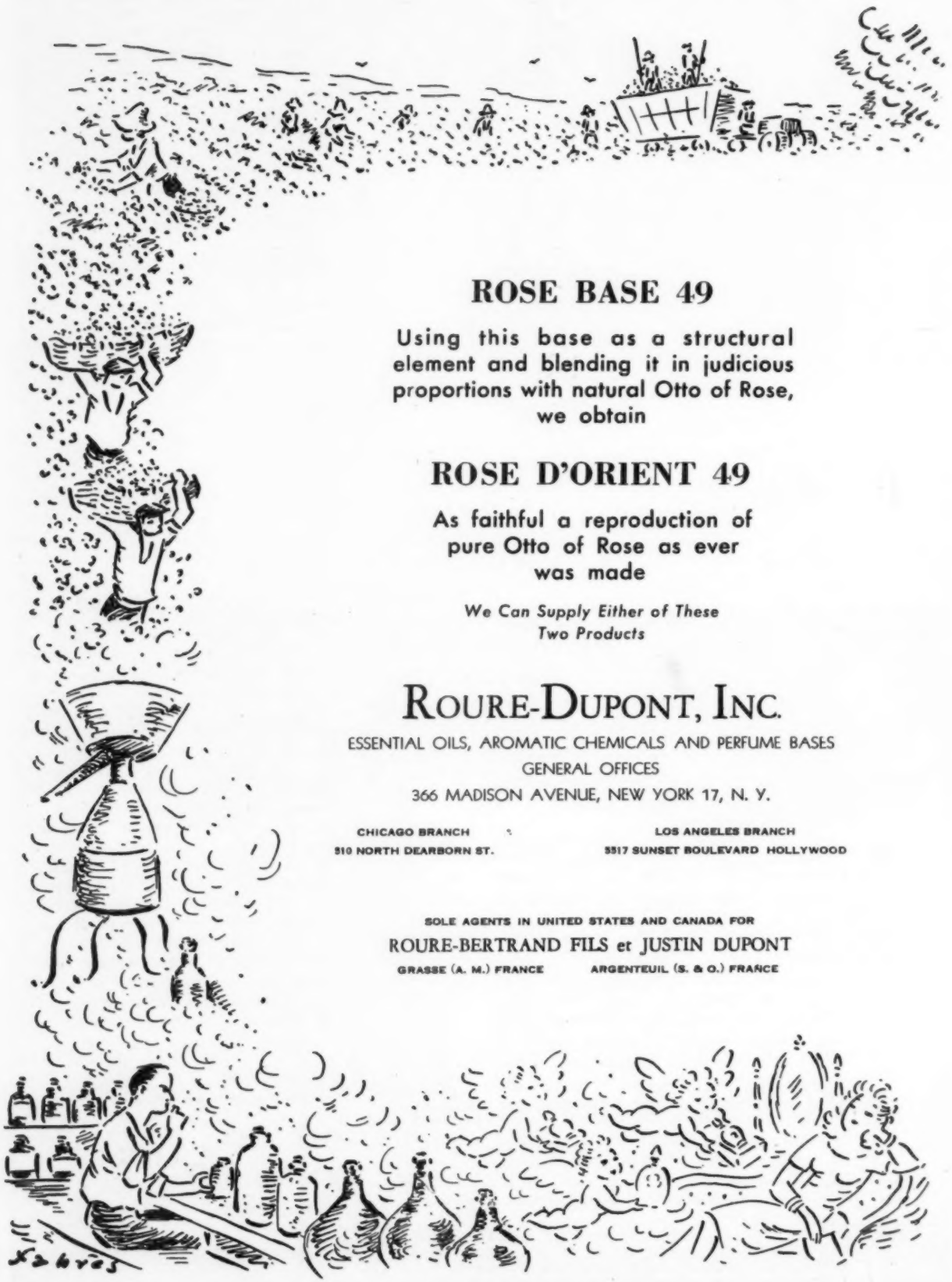

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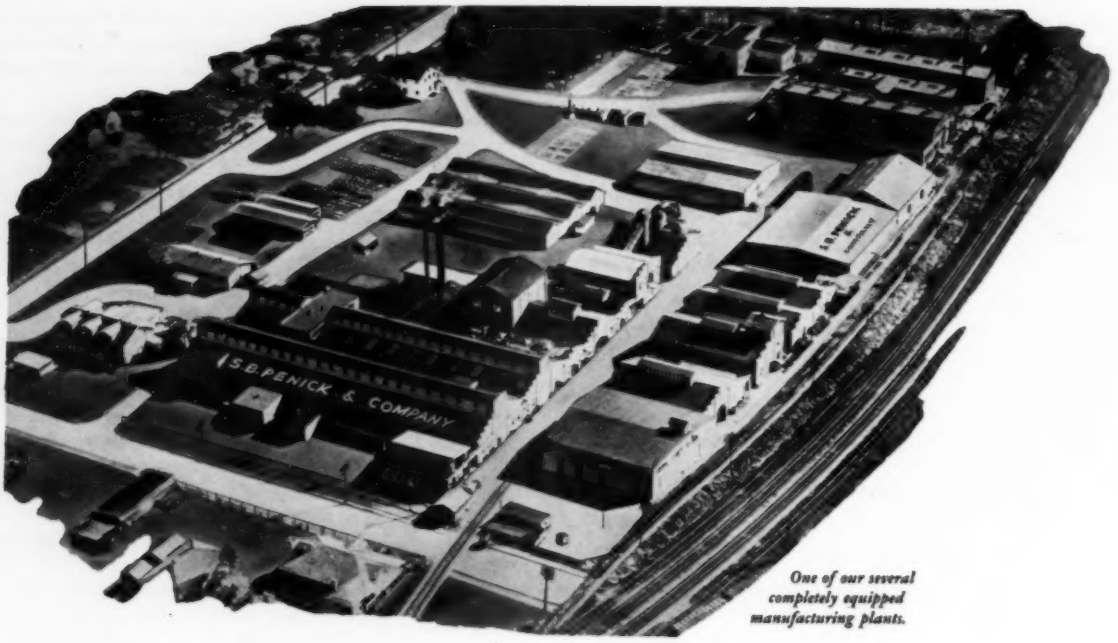

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DISTILLERS OF RARE AND QUALITY ESSENTIAL OILS—MANUFACTURERS OF AROMATIC CHEMICALS

"My husband bought this in your store while I was in Paris . . . and I want to return it."

KEEPING POSTED

Research in This Industry

DRUG, cosmetic, chemical, food, beverage, paper, petroleum, aircraft, and miscellaneous industries are covered in the third annual survey of the research requirements of American Industry, recently completed by the Evans Research and Development Corporation.

The survey reveals that drug manufacturers expend 44 per cent of their research time on improvement of present products or processes, 51 per cent on development of new products and processes within their own field, 17 per cent on development of new products and processes in other fields, and 12 per cent on government contract research. Cosmetic manufacturers spend 54 per cent on present products and processes, 48 per cent on new products and processes in the field, 14 per cent on new products and processes in other fields, and 5 per cent on government contract research.

If present conditions remain the same for the balance of the year 35 per cent of the drug manufacturers and 9 per cent of the cosmetic manufacturers will increase their research activities; 2 per cent of the drug manufacturers and 9 per cent of the cosmetic manufacturers will decrease them, and 63 per cent of the drug manufacturers and 82 per cent of the cosmetic manufacturers will not change them. If a marked upswing occurs 87 per cent of the drug manufacturers and 76 per cent of the cosmetic manufacturers will proceed normally, while 13 per cent of the drug manufacturers and 24 per cent of the cosmetic manufacturers will proceed cautiously. Should the economic trend be downward 14 per cent of the drug and 10 per cent of the cosmetic manufacturers would curtail their technical staffs, while 81 per cent of the drug and 86 per cent of the cosmetic manufacturers would not curtail them. If a cut were made the greatest cut would occur in new products and processes in the case of 20 per cent of the drug and 16 per cent of the cosmetic manufacturers; in improvement in existing products and processes in the case of 11 per cent of the drug and 4 per cent of the cosmetic manufacturers; in fundamental long-range research in the case of 33 per cent of the drug and 41 per cent of the cosmetic manufacturers; and in each of the three proportionately in the case of 36 per cent of the drug and 33 per cent of the cosmetic manufacturers.

Five Advances in Cancer Fight

FIVE "noteworthy" advances in the fight against cancer have occured in the past year, in the opinion of the American Cancer Society and the National Research Council's Committee on Growth which acts as scientific adviser to the cancer society. The five advances are:

1. Discovery of new evidence on chances of the blood serum in cancer patients which may lead to a practical blood test for cancer.
2. Finding that anti-folic acid vitamin compounds give definite, though limited, benefit in treatment of acute leukemia.
3. Preliminary testing of the anti-arthritis hormones, ACTH and cortisone, in cancer with encouraging results though authorities doubt that they will prove specific remedies for cancer.
4. Discovery that a new chemical compound called guanazola will check the growth of certain types of cancer in mice without apparent harm to the animals.
5. Further evidence that chemicals which produce "environmental cancer" also cause changes in the hereditary pattern of the body's cells.

Schering Earnings Correction

IN GIVING net income figures for Schering Corporation in our April issue the figures published were in error. The correct net income figure for the year 1949 is $1,740,597, and the correct figure for 1948 is $1,590,890. The figures which we gave last month for net income were really the figures for net working capital which were: $5,379,954 for 1949, and $4,865,352 for 1948. Sales figures were correctly given at $14,824,589 for 1949, and $11,770,151 for 1948.

New Born Baby Opens Research Building

"SYMBOLIZING the Institute's concern with the preservation of health and life," the opening of the new laboratory building of the Sterling-Winthrop Research Institute in Rensselaer, N. Y. is accomplished by the first cry of a newborn baby coming into the world on the day of dedication, May 17. The trick is

accomplished by an electronic hook-up between the delivery room in Albany Hospital (across the Hudson River from Rennselaer) which makes use of sound waves of the baby's cry to activate a motor to raise a curtain at the Institute's main entrance. The baby born at the right time gets a $3,000 college scholarship gift from Sterling. The dedication, which also marks the fiftieth anniversary of Sterling Drug, Inc., includes a two-day symposium on the "Second Half of the 20th Century in Medicine."

Trade-Mark Oppositions

IN THE case of Brookfield Laboratories against Sharp & Dohme, the U. S. District Court held that the trade-mark Sulfodene is not confusingly similar to Sulfathalidine or Sulfasuxidine. The trade-mark Sulfodene was applied to liquid medicinal preparations for treatment of domestic animals.

The trade-mark Neyso used on a skin ointment was found by the Commissioner of Patents to be confusingly similar to Lysol in an opposition brought by Lehn & Fink against Ney. The fact that one is a liquid and the other an ointment does not differentiate between them nor is the similarity of the products affected by the fact that the opposer's product has additional uses, in the opinion of the Commissioner.

The trade-mark Syrutussin for a cough remedy was held by the Commissioner of Patents to be confusingly similar to Pertussin, in an opposition brought by Seeck & Kade against E. J. Moran & Co. The Moran Company, owner of the Syrutussin mark sought to have the trade-mark Pertussin cancelled on the argument that it is descriptive and that it stems from pertussis, which is a dictionary word meaning whooping cough. The Commissioner held that in view of the extensive and long use of Pertussin for treating coughs without any showing of interference with the legitimate descriptive use of pertussis, the cancellation petitioner did not sustain the burden of showing that he had been damaged by the registration of Pertussin, which was held to be not a mere misspelling of pertussis, and is not descriptive of medicinal preparations for treating coughs. To maintain an opposition, it is not necessary that the opposer own registration of the mark on which he relies, nor that he have exclusive rights to a mark, since, if the applicant's mark is confusingly similar to one previously used, it is not entitled to registration. Descriptiveness of an opposer's mark can be considered only in so far as lack of descriptiveness might indicate lack of confusion.

In an opposition brought by Procter & Gamble against Amenta, the Commissioner of Patents held that hair tonics have the same descriptive properties as shampoos, and therefore, he held the trade-mark Dermene to be confusingly similar to Drene. Addition of the applicant's name, Angelo Amenta, or other similar material to Dermene would not avoid confusion, in the opinion of the Commissioner.

Eno's Salt Stipulation

ENO'S Effervescent Salt has no therapeutic efficacy in the treatment of constipation or gastric hyperacidity in excess of the relief afforded by a laxative antacid to a temporarily constipated condition or a temporary hyperacid condition, according to a stipulation concerning advertising claims approved by the Federal Trade Commission. The agreement also prohibits claims that the product enables one to keep cool or has a refrigerant effect upon the body.

A.M.A. Accepts More Cosmetics

THE Committee on Cosmetics of the American Medical Association recently listed a number of cosmetic preparations which "have been accepted as conforming to the Rules of the Committee on Cosmetics." They are:

Noreen Super Color Rinse, Beauty Products, Incorporated, a dry powder consisting of mildly acidic substances and small amounts of stable coal tar dyes not of the class of oxidation dyes to which paraphenylenediamine belongs. It is intended to temporarily intensify the natural shade of hair or to blend in gray hair with the surrounding darker color.

Marjorie Pepper Bell Creme Lacquer, a semi-solid mixture of fatty materials, to aid in grooming the hair.

Marcelle Nail Lacquer, a hypoallergenic, fluid, highly pigmented lacquer consisting of nitrocellulose, especially selected resin and plasticizers, acetates and alcohols as solvents, pigments and certified lake colors, for the purpose of enhancing the color of the nails.

Albolene Cream (Plain and Scented), McKesson & Robbins, a hypoallergenic anhydrous white cream made up of petrolatum and waxlike materials having a melting point of 41°C., to cleanse and lubricate the skin.

Soothe Skin, McKesson & Robbins, a white emulsion consisting of stearic acid, mixed emulsifiers, titanium dioxide and water, to assist in keeping the skin of the hands and face soft and smooth.

Soothe Skin Hand Cream (McKesson & Robbins), a white vanishing cream containing stearic acid, an emulsifying agent, glycerin and water, for emollient and protective purposes.

Yodora Deodorant, McKesson & Robbins, a white cream containing antibacterial substances, for inhibiting perspiration odor without inhibiting the flow of perspiration.

Pax-Lano-Sav Heavy Duty Skin Cleanser, Packwood Manufacturing Company, a granulated flesh-colored skin cleanser containing a superfatted soda soap, water softeners, vegetable scrubbers and blended emollient substances, to provide a mild cleansing agent for the removal of light or heavy industrial soil. May be obtained in the "regular" (medium coarse) granulation or "fine" granulation.

Pax Sulphonated Oil Skin Cleanser, Packwood Manufacturing Company, a clear green-tinted liquid emulsion containing a sulfonated vegetable oil, petrolatum, lanolin, a wetting agent and perfume, for use as a cleansing agent for excessively dry skin.

Toni Neutralizer, a white powder composed of potassium bromate, which becomes a clear liquid when dissolved in water. To be used at specified time intervals to arrest the chemical action of the waving solution and to return the hair to its normal chemical structure.

Toni Creme Lotion, a white cream solution with a salt of thioglycolic acid as its essential ingredient. This is a cold waving solution and permits waving of the hair without chemically or electrically produced heat. It is most satisfactorily adapted to use in the home, provided directions are followed carefully.

Peau Seche Dry Skin Cream, Wright & Lawrence Laboratories, a light, yellow anhydrous ointment-like mixture of lanolin and other fats and oils chemically similar to fatty secretions of normal skin, for relieving dryness of the skin.

Peau Seche Cleansing Cold Cream, Wright & Lawrence Laboratories, a white ointment-like cream emul-

sion of the beeswax, borax and liquid petrolatum type, especially for cleansing the skin.

Peau Seche Dry Skin Superfatted Soap, Wright & Lawrence Laboratories, a white tallow soap with added excess fat, for cleansing the skin with minimum drying effects.

Peau Seche Liquid Skin Groom, Wright & Lawrence Laboratories, a nongreasy, white opaque emulsion of stearic acid, vegetable oil, alcohols, glycols, and other emulsifying agents, for relieving dryness of the skin.

Peau Seche Hand Cream, Wright & Lawrence Laboratories, a nongreasy, light pink, ointment-like cream emulsion with stearic acid, fatty esters of glycerin, glycols and emollient fats and oils, for relieving dryness of skin and hands.

Peau Seche Skin Groom Foundation Cream, Wright & Lawrence Laboratories, a nongreasy, white ointment-like cream emulsion containing stearic acid, petrolatum, glycols, and other emulsifying agents, for application to the face before using make-up preparations.

Cancel Deodorant Cream, Wright & Lawrence Laboratories, a nongreasy, white ointment-like cream emulsion containing an antibacterial substance and an aluminum compound, for deodorizing the skin and inhibiting the flow of perspiration.

No Welch Packaging Award

THE Charles S. Welch Award Committee of the Toilet Goods Association has decided that no award will be made this year due to the fact that no outstanding package worthy of an award was developed during the past year. In communicating this decision to H. L. Brooks, chairman of the Charles S. Welch Award Committee, Modern Packaging Editor, C. W. Browne who is chairman of the Board of Judges, wrote:

"Previously, there has always been some one package that stood out and made your judges say, 'This is it.' But, that was not our experience this year. It seemed to us that many of the entries showed a straining after effect—a desire for something unique that went beyond the confines of the practical and beautiful. We sincerely felt that the cause of progress in packaging would not be served by making an award and that withholding such an award this year would stimulate keener interest in the competition another year."

Ammoniated Dentifrices and Dentists

USE of ammoniated dentifrices has been recommended to patients by 92 per cent of the dentists of this country, according to the findings of a Pierre Fauchard Academy Poll on the most commonly used drugs and technics for the control of dental caries. Exactly half of all dentists recommend the ammoniated preparations for most of their patients and an additional 42 per cent recommend them for some of their patients. Inquiry into the reasons why dentists recommended these dentifrices revealed that with 39 per cent of the dentists acknowledging that they have formed a definite opinion on the likely value of the products, opinions ranged through all shades of approval and disapproval. Many expressed the sentiment, "it may do some good and can't do any harm," and another predominant thought was that anything which induces patients to take more interest in brushing their teeth is all to the good.

Society of Cosmetic Chemists Meeting

A method of testing for the effectiveness of antiperspirants in reducing perspiration in the axillae is being presented by Dr. J. A. Killian at the meeting of the Society of Cosmetic Chemists, May 19 at the Savoy-Plaza Hotel, New York. Methods of determining the effectiveness of dentifrices in reducing decay by animal experimentation is being presented by Dr. Joseph F. Volker, dean of the University of Alabama Dental School. A paper also of interest to chemists working in the dentifrice field is being given by Dr. V. C. Le Gloahec of the Algin Corporation of America on carrageenin and caraggenates. The chemical classification of keratins is being discussed by Dr. R. J. Block, Department of Biochemistry, New York Medical College.

Tuberculosis Antibiotic by Pfizer

VIOMYCIN, a new antibiotic effective against tuberculosis, has been developed by Chas. Pfizer & Co. and is now undergoing clinical tests. The drug is capable of appreciably suppressing the course of tuberculosis infection, according to Dr. Walsh McDermott of New York Hospital-Cornell Medical Center, New York. Furthermore it appears to be active against tuberculosis germs which have become resistant to streptomycin as well as against those still sensitive to streptomycin. Viomycin has been tried on a limited scale in man. Though it is somewhat toxic it can be used for long periods. However, until studies are completed, no prediction can be made as to the drug's ultimate importance.

Terramycin, Pfizer's other antibiotic specialty, has been found to be effective against pneumonia, blood poisoning, urinary infections, follicular tonsillitis, septic sore throat, and other afflictions, according to a report issued by Mayo Clinic.

"A relatively nontoxic polyvalent antibiotic agent," the report states, "it has a fairly wide range of antibacterial activity. Its activity is similar but not identical to that of Aureomycin." The report also states: "The evidence of nausea and vomiting with Terramycin is definitely less than with Aureomycin."

Rain From Black Goats

MONSANTO Chemical Company Board Chairman Edgar M. Queeny hit the front pages of the New York newspapers and the news broadcasts for the New York area when he landed at International Airport and told reporters from rain-starved New York City how rain was made in Africa. Coming back from a four-month photography expedition to Africa, Mr. Queeny said that when the expedition was in Anglo-Egyptian Sudan, where it hadn't rained for six months, clouds began to gather. After waiting some time for the clouds to break away so that they could take pictures, the Queeny sarafri was told that a native medicine man would make it rain and dispel the clouds. The ritual consisted of sacrificing a black goat and cooking it in pots containing the bones of rainmakers. Within a few hours the downpour began, said Mr. Queeny who gave the rainmaker a $15 wristwatch for his successful efforts.

Meanwhile, scientists are trying to produce this sort of a result with by seeding clouds with silver iodide, dry ice and other things. Perhaps research will be undertaken to determine the active ingredient of cooking black goat, perhaps mixed with bones of rainmakers as a catalytic agent.

The FDA and Antihistaminics

THE action of the Food and Drug Administration in releasing antihistaminics for over the counter sale in the treatment of colds was explained at the recent American Drug Manufacturers Association meeting by Dr. Robert T. Stormount, who was Medical Director of the Food and Drug Administration at the time these products were released. Dr. Stormount, who is now secretary of the Council on Pharmacy and Chemistry of the American Medical Association, explained as follows:

"At the time the first new drug application for over-the-counter sale of an antihistaminic drug was presented I was serving as Medical Director of the Food and Drug Administration. It was my considered opinion after reviewing the evidence presented that, under the new drug provisions of the Act which pertain solely to safety for use, the application must be made effective. The evidence that an antihistaminic drug could cure or abort colds was not at all convincing but on the other hand there was no evidence whatsoever available at that time to show that the drug in question did not have the capability of eliminating the "common cold" as a problem in public health. Consequently the application was made effective on the basis of safety for use inasmuch as there was adequate evidence to indicate that the product appeared reasonably safe for self-medication when used in accordance with the label directions and warnings. Other antihistaminics bearing labeling which permitted over-the-counter sale rapidly appeared on the market. Blatant advertising of the antihistaminic as cures or "killers" of the common cold was extravagantly promoted. As a result many millions of people have purchased these products. Some individuals, honestly believe the drugs have been of benefit to them, while others characterize them as a fraud. Evidence is now accumulating from well-controlled clinical studies to show that the antihistaminics are not 'cold-killers.' What value they may have in affording temporary relief from certain symptoms identified with the common cold remains to be seen.

"Many laymen as well as members of the medical profession have sharply criticized the government for allowing these drugs to be sold directly to the general public. In effect, however, this is rather a demand for additional or amending legislation to permit stricter regulatory controls, and it is not at all unlikely that if the present trend continues, more stringent laws governing drugs will be put into force. There is an indication already that efforts may be made to arm the new drug section of the Act with an 'efficacy for use' provision in addition to the 'safety for use' requirement."

Electronics and Employment

A CATASTROPHIC second industrial revolution brought about by the use of the automatic machine is not in the future, according to Dr. Norbert Wiener of the Massachusetts Institute of Technology, who says that "unless we prepare ourselves for it our industrial cities face a vast decentralized process and a shifting of population to rural districts brought about by unemployment." He said that machinery controlled by "electric brains" could, within a decade, "completely wipe out the assembly line." "A complicated electronic machine will do the same work faster and better," he said.

"We must prepare for this," declared Dr. Wiener, "by intelligent use of welfare until a time stabilization occurs. We must change our judgment of value from a quantitative to a qualitative one. We can no longer fear the word 'socialism.' Where an assembly contained a hundred workers, with the automaton this same line will resemble the emptiness of a huge power plant with only a skeleton crew to service the machine."

American Drugs to Israel

AMERICAN drug manufacturers can easily meet the competition of European producers both as regards price and quality, according to Dr. Issac Kovelman, adviser to the pharmaceutical section of the Ministry of Health of Israel, who returned home late last month after a three and one-half month purchasing trip to this country. Orders placed here for hospital supplies and building materials totaled $1,500,000. Antibiotics which Israel formerly bought from England are now bought here, said Dr. Kovelman.

Total Synthesis of Estrone

THE first total synthesis in this country of the female sex hormone estrone has been accomplished by the University of Wisconsin chemists. "This synthetic duplicate of natural estrone was developed from easily obtainable coal tar products after four years of experimentation," says Dr. W. S. Johnson, who headed the research. At present estrone is obtained by extraction from the urine of pregnant mares or by chemical conversion of closely related substances such as cholesterol, this process being referred to as "partial synthesis." "We want to emphasize that our synthesis of estrone will not make the hormone readily available at a low cost," Dr. Johnson cautions. "At the present time our process is not practical for any large scale production. However, after further research and refinement, such a process may help make estrone more readily available at lower cost to the nation's hospitals."

Only four times in history has any hormone been totally synthesized, and twice the trick has been turned by Dr. Johnson and his associates. Dr. Johnson and his group are now working to synthesize the non-aromatic hormones, of which cortisone is a member. "All the cortical hormones belong to this group," explains Dr. Johnson, who adds: "the structure of these hormones is so complex that duplication in the laboratory will be tremendously difficult. However, if we ever can break into that group we will be able to make just about anything."

T. G. A. Scientific Meeting

FORMULATION of Cold Wave Preparations, by I. R. Hollenberg, of Van Dyk & Co., opens the meeting of the Scientific Section of the Toilet Goods Association May 18 at the Waldorf Astoria Hotel. Other interesting papers at the meeting are: Some Applications of Statistical Methods to Biological Problems in the Testing of Cosmetics, by Lila F. Knudsen, statistician of the Food and Drug Administration; Physical, Pharmacological and Dermatological Studies of Sunscreen, by Dr. John Groopman, Bellevue Medical Center, and Edward P. Moorish, Firmenich & Company; An Appraisal of Methods Used in Caries Control, by Dr. J. F. McDonnell, University of Illinois College of Dentistry; The Control of Dental Caries by Means of Oral Hygiene Procedures, by L. S. Fosdick, professor of chemistry, Northwestern University Dental School; Solid Fatty Acids in Cosmetics, by William C. Griffen and Phyllis J. Carter, Atlas Powder Co.; Development

of Odor Preferences, by Dr. Dean Foster, director of Olfactory Research, Joseph E. Seagram & Sons; Some Illustrative Phases of Biological Research in "Cosmeticology," by Dr. John A. Killian.

Socialized Medicine Very Unpopular

THREE polls conducted by members of Congress in their districts show overwhelming opposition to compulsory health insurance. Results of two of the polls have been completed and have been published in the Congressional Record, while about one-fourth of the third survey has been tabulated. Representative J. Harry McGregor of Ohio, sampling his district on this and other subjects, found that only ten per cent of the people want socialized medicine. Mr. McGregor asked twelve questions, including: "Do you favor any type of Federal legislation placing the medical and dental professions and operation of our hospitals under Federal control?" Tabulation of 2,000 replies received revealed that only ten per cent were in favor of this type of legislation, while 90 per cent were opposed.

Representative Thomas E. Martin of Iowa sent out 25,000 questionnaires in a similar type of survey and received 4,221 replies. Among eighteen questions he asked: "Do you favor socialized medicine?" Those answering yes were 575, or 14 per cent; while those answering no were 3,409, or 86 per cent. Both of these surveys cover districts which are just about equally divided between rural and urban residents.

In a district in Queens County of New York City, Representative Henry J. Latham sent out 95,000 questionnaires, of which 20,000 were returned. When only 5,000 had been tabulated, only 753, or 13 per cent answered yes to the question "Do you favor socialized medicine?", while 4,424, or 87 per cent answered no. A second question in this questionnaire read: "Do you favor a national health program which would not socialize health services but would supply Federal grants and aids to the States and communities for health services?" 3,009, or 58 per cent answered yes; while 2,136, or 42 per cent answered no.

Ewing and the New York Governorship

"THE Truman-backed compulsory health insurance plan is shaping up as a major issue in the fall election," said Murray Snyder recently in the New York Herald-Tribune, "and the impression is growing here that the President wants Oscar R. Ewing, Federal Security Administrator, to carry the ball in New York as Democratic-Liberal candidate for Governor. An indication that the President is helping to fuel the boom for Mr. Ewing was seen in the unusual circumstances of Mr. Truman's greeting to the League for industrial democracy on the occasion of its forty-fifth anniversary luncheon April 15. The league, after inviting Senator Herbert H. Lehman to speak. The letter didn't name the speakers. The White House replied that such a message would be sent—via Mr. Ewing, who would read it at the affair.

"Mr. Ewing insists he is not a candidate, although he admits 'a lot of people' have talked to him about running for Governor. He is extremely confident that health insurance can be sold to the voters of a state as progressive as New York, although he admits the selling job has been unsuccessful so far in the face of the 'socialized medicine' attacks by Republicans and the medical profession. He points out that the Murray-Wagner-Dingell health insurance bill was the principal issue in Montana in 1948 when Senator James E. Murray, its Democractic sponsor, successfully sought reelection.

"The F. S. A. head says there are circumstances under which he would not accept the Democractic nomination for Governor, even if it were available. Presumably he refers to the possibility that the health insurance coupled with his candidacy might create a fatal split in his party between the New Deal-Fair Deal faction and the conservatives."

Toni Stops Tone-Oil Mark

IN A cancellation proceeding brought about by the Toni Company against DiOrio in the Patent Office concerning the registration of the mark Tone-Oil for liquefied cream for permanent waving, the Commissioner held that this mark is confusingly similar to Toni, and that Pina-Tonic and Pina-Tonal, which marks were previously obtained by DiOrio, are not legal equivalents of Tone-Oil. Dioro requested cancellation of the mark Toni, but this was refused on the basis that the evidence did not support the contention that Toni is merely the name of an individual and that the petitioner would not be injured since Toni is not his name and his use of Tone is subsequent to the registrant's use of Toni.

Fight Shift of Patent Office

PATENT attorneys in the drug and chemical field, as well as patent law associations are bitterly opposing President Truman's reorganization plan No. 5 which would place the Patent Office directly under the control of the Secretary of Commerce with the authority to delegate to other persons the powers now exercised by the Commissioner of Patents. Through communications and closed hearings before the Senate and House Judiciary Committees, warnings were expressed that enactment of the plan will end the independent status of the Patent Office, and that this office will become a "tool" of the politicians.

While not openly expressed for the record, the opposition is largely brought about through the feeling that the plan might constitute an entering wedge to most radical changes in enforcement of patent laws. It is said that there is a strong body of opinion in government which believes that no patents should be issued in the field of public health and that all developments for improvement of health or alleviation of illness should be dedicated to the public. There is also said to exist a feeling that the patent laws should be used to regulate the size of corporations by denying new patent rights to a corporation after it has reached a certain size. Such a policy could be put into effect under the plan without congressional amendment of patent laws, simply being accomplished through administrative action on the part of anyone placed in charge of administering the patent laws. This would be possible because of a peculiar provision of the patent law itself.

There is nothing in the patent law requiring the Commissioner of Patents to issue a patent, nor is there anything in the law compelling him to refuse to issue a patent. The only appeal to the courts that can be made is from a decision of the Commissioner refusing to issue a patent. All that the Commissioner or anyone else in charge would have to do is simply to take no action on a patent application, and thus he can delay indefinitely the issuance of patents in the field of public health, or to a corporation which he thought should not be allowed to become any larger or should be reduced in size.

NEW DRUGS FOR TUBERCULOSIS

By Milton A. Lesser

ILLUSTRATIONS COURTESY NEW YORK TUBERCULOSIS AND HEALTH ASSOCIATION

ALL over the world, scientists have long labored to find a specific therapeutic substance that could stop the progress of tuberculosis and permit healing. Until recently, however, tuberculosis resisted such specific drug treatment. Now the picture is changing and progress is amazingly rapid. For the first time in the history of the disease, agents are available which have a specific lethal action against the tubercle bacillus.

Although, as noted by Feldman and Hinshaw,[1] the completely ideal anti-tuberculosis drug has not been found as yet, is seems probable that substances equal to or superior in effectiveness to known agents may be discovered. Such a possibility, they feel, warrants the expenditure of great effort and this search may become one of the most important and exciting adventures in medical research.

Such substances will accelerate the already favorable trend toward the conquest of tuberculosis. As was pointed out by Erikson[2] it is now more than 40 years since a concerted public effort for the control of tuberculosis was started in this country. Great advances in the diagnosis of the disease have been made and facilities for treatment have been enormously increased. The results would seem to have justified the effort because tuberculosis mortality continues to show a gratifying decline. According to Wassersug,[3] the death rate for tuberculosis, with few interruptions, has shown a continuous fall since 1910. In 1946, it was only 36.4 per 100,000 population, which amounted to a 9.2 per cent decrease from the rate of 40.1 in 1947. In 1947, the death rate had dropped to 33 per 100,000.

Unfortunately there is another side to the picture that is not quite so pleasing. With the decline of the death rate of tuberculosis, warns Erickson, there is a tendency to be overly optismistic and complacent about it. That the time for complacency is still far off is quite evident in that tuberculosis is still the most destructive and expensive disease in which the cause is known and for which effective treatment is available.

Statistically speaking,[4] tuberculosis ranks seventh in the list of diseases causing the greatest mortality. It still accounts for approximately 50,000 deaths annually in the United States. There are about 500,000 known cases in this country and many more undiagnosed cases. Moreover, its relatively long period of disability frequently results in considerable economic hardship.

It is also said that tuberculosis claims the lives of more people between the ages of 15 and 34 than any other disease. Pertinent in this connection are the data with respect to the incidence of the disease among Selective Service Registrants in World War II. Tuberculosis was found[5] to be tenth in importance as a cause for rejection. It was responsible for 171,300 or 3.5 per cent of all rejections of men between the ages of 18 to 37, as of August 1, 1945. During the period 1940-1944, out of every 1,000 men examined through Selective Service, 20.1 were found to have some form of tuberculosis.

Of course these figures pertain to the incidence of tuberculosis in the United States. They are generally quite different in other countries. In many parts of the world, the toll from tuberculosis remains tragically high and progress in its conquest is pitifully slow. It is quite understandable that public health workers in these areas should be keenly interested in the antitubercular substances being developed in the great research centers in America and Europe.

Several antibiotic and chemotherapeutic agents are being used in the treatment of tuberculosis and others are being studied to determine their efficacy against the bacillus. Pending the discovery or the development of a more ideal agent, it is generally agreed[6] that streptomycin is the drug of first choice in the treatment of various forms of tuberculosis. As noted in the recent report of the Council on Pharmacy and Chemistry of the A.M.A.,[7] it still remains the most potent chemotherapeutic weapon presently available in the fight against tuberculosis. However, the antibiotic must be used intelligently and with full recognition of its shortcomings and limitations.[1]

Concise and indicative is the statement made recently by Aronovitch and Lewin.[8] "The efficacy of streptomycin in the treatment of tuberculosis is no longer open to doubt. The ever-increasing reports in the literature attest to its value, but these reports are still tinged with caution and at times hint at disappointment. There is, at one and the same time, enthusiasm for the effect of the drug on tuberculosis lesions and doubt and disappointment because the effect is not sufficiently marked, or is complicated by some of the perverse actions of the drug. That streptomycin will affect tuberculosis beneficially is now an accepted fact; that it will of itself cure tuberculosis is open to grave doubt. These are the two facts which make this drug at once the most valuable and the most disappointing in tuberculosis therapy."

In discussing the value of streptomycin in clinical tuberculosis, Feldman and Hinshaw[1] pointed out that the bacillus of tuberculosis produces a number of different diseases in humans. On this basis, it should not be expected that any one form of treatment should be equally applicable to all these diseases. These various diseases, however, are all caused by the same organism, *Mycobacterium tuberculosis*. Hence, if the organism is so situated as to be exposed to the action of streptomycin, the suppressive effect of the drug should have a certain degree of effectiveness. Studies have shown that streptomycin is not distributed through all tissues of the body in equal concentration.

This fact is only part of the great amount of information that has been obtained concerning the effects the antibiotic produced by *Streptomyces griseus*. First reported by Schatz, Bugie and Waksman[9] in 1944, the surprising accumulation of data in such a short time is due to the intensive efforts of various groups, including the Veterans Administration and the Public Health Service.

It is generally agreed,[10] for example, that the therapeutic results obtained with streptomycin are due largely to the suppression of the tuberculosis infections. It prevents the development of new lesions, but without producing complete or biological cure. This is evident in the fact that relapsing infections have often been observed on discontinuance of treatment, especially in cases with persistently positive sputum or uncollapsed cavities and in individuals with emaciation and low natural resistance. In other words,[11] streptomycin appears to suppress tuberculosis rather than to eradicate it. Its action seems to be bacteriostatic rather than bactericidal.

The general effects of the drug on the sick patient, according to Aronovitch and Lewin,[8] are "remarkable." They note that there is a rapid subsidence of the toxic effect of the disease within very few days. The temperature falls, the pulse slackens and the patient experiences a feeling of well being. He eats better, sleeps better and he starts to gain weight. They warn, however, that in some cases the benefit, which seems so clearly evident, may be illusory because the pulmonary lesion may spread in spite of the feeling of well being. Prognosis must be cautious until the X-rays are checked. Nonetheless, in most cases there is radiological improvement concomitant with the constitutional improvement.

Detailed information on the use of streptomycin in the treatment of tuberculosis is to be found in the report of[12] the clinical subcommittee of the Medical Section of the National Tuberculosis Association and the American Tradeau Society. Recently, Phillips[13] has concisely summarized the indications and contraindications for this antibiotic. Thus, in pulmonary tuberculosis, the acute inflammatory processes generally respond well, whereas caseous, fibrotic, or extensively cavitated lesions respond poorly. Because most active cases of pulmonary tuberculosis are mixtures of these various processes, it has been found most satisfactory to

(*Continued on page 561*)

COSMETIC ALLERGIES*

By Rita C. Parsil, B.A.†

and

Francis M. Whitacre, Ph.D.†

THE use of cosmetics today ranges from a light dab of face powder on the nose to the use of the new flattering foundation bases, powder, rouge, lipstick, eye make up and hand preparations. The majority of women use cosmetics for years with no ill effect, but, unfortunately, there is a small group of women who react to some cosmetic used in their daily beauty routine. A reaction of this type is called an allergy or sensitization and can manifest itself in innumerable forms, i.e. from a sneeze to a violent skin reaction.

Although the percentage of women allergic to cosmetics is small it is felt that some of the pertinent facts concerning this malady should be pointed out because those who are affected are confused when it comes to choosing the correct cosmetics. And we all (men, too) realize what an important role cosmetics play in the life of the American woman.

First, a word about the definition of allergy. An allergy is an altered degree of susceptibility caused by a primary exposure and manifested in subsequent exposures. In less technical terms this simply means in the case of cosmetics that a certain one, for example nail polish, may be used for the first time with no visible reaction but the second application, possibly weeks later, may cause an eruption on the eyelids or some other part of the body. Now, according to the definition our susceptibility has been altered by the first application of the nail polish. After this first application changes have taken place in the body which cause the reaction to the second application. What is believed to happen is that antibodies were formed after the first application in defense against this foreign substance. Now, upon the second application of nail polish the antibodies react with the nail polish. When this reaction takes place it causes the release of a substance believed to be histamine which is responsible for the symptoms of the allergy. The formation of the antibodies after the first application causes the trouble in the body. It is only when we have the reintroduction of the offending substance which reacts with the antibodies that we have the annoying symptoms of allergy. The offending material, whatever it may be, is termed allergen. In the case of cosmetics when the reaction involves the skin, it is called dermatitis venenata or simply dermatitis. This is the most common reaction in cosmetic allergy but, as stated before, other manifesta-

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†Schieffelin & Co., New York.

tions have been reported such as hives, hayfever, asthma or cramps.

It is thought that the antibodies remain localized in one part of the body and this is called the shock organ. The allergen-antibody reaction takes place in this area and therefore the symptoms appear in this area. This is the usual pattern of allergies, but, of course, there are exceptions where large areas of the body are involved. Some cosmetics will cause allergies in areas near the site of application rather than on the site of application but this will be explained in more detail as we deal with specific allergies.

When allergies were first recognized by the medical profession it was believed that they were only caused by the introduction of foreign protein into the body. This theory has had to be expanded to include substances of non-protein nature which have been known to cause allergic symptoms. As far as cosmetics are concerned it is thought that some ingredient in them may combine with a protein substance of the body and this protein-cosmetic substance (allergen) would then produce antibodies and the allergen-antibody pattern of reaction would occur. There is no definite proof that this is what happens and it can only be considered a theory.

Who is apt to be a victim of cosmetic allergy? Will it be a young woman or an older woman? Will it be the woman who uses many different types of cosmetics daily or the one who occasionally applies a light coat of lipstick? Will it be the woman with dry skin or one with oily skin? Allergy, like many other diseases, seems to have no limitations. Anyone can be affected. However, several general factors influencing the tendency for one to become sensitized to a foreign substance have been observed. One of these is heredity. It seems that we inherit a predisposition to become sensitized or allergic to a substance. The allergy itself is not inherited but just the tendency to develop one may be. For example, if one parent has asthma (an allergy) you would be more apt to develop an allergy of any type than a person who has no family history of sensitivity. Remember, though, this does not mean that a person with no allergy history (family) is immune from an allergy.

It appears that the more foreign a substance is to the body the more apt it is to cause a sensitivity. This is true of some of the newly developed cosmetics which have appeared on the market. They may contain substances with which we have had no previous contact. The chances of these substances causing allergies are much greater than some substance with which we have daily contact. On the other hand, allergies have been known to develop after years of exposure to certain cosmetics. The only logical conclusion from this is that it is impossible to tell who will be affected and when.

Now that we have looked at some of the general aspects of allergy we would like to discuss some specific cosmetic allergies. Before we do this, a word about what substances in cosmetics cause allergies and what manifestations the allergies assume. It seems almost possible to say that practically any substance in cosmetics can cause an allergy to some persons and the reaction may be of any type. Therefore, the purpose of this article is to point out the most common offenders in the most frequently used cosmetics and acquaint you with their most usual manifestations.

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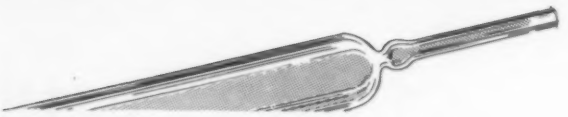


AMPOULE INSPECTION

By William James Giese, Ph.D.
*and H. E. Sagen, Ph.D.**

FACTS about how people are performing on jobs and facts about why people are performing as they are must be established before there is a sound basis for knowing what to do to improve the performance. When we are dealing with human beings a few casual observations do not constitute the basis for a stable fact. A fact to be stable must be the result of measuring performance under controlled conditions a sufficient number of times. In this study thirty-three employees, who were being tested, inspected a job sample of 100 20cc ampoules from six to nine times for a total of 25,000 judgments. The record of these judgments, measures of the employees' visual skills, personal information, a record of the speed, time of day, and day of week provided the basic data from which the important facts could be gleaned.

The reason we made this study was to establish facts about ampoule inspection so that the quality and quantity of inspection could be improved. Since we had measurements of the visual skills of these employees, the first step was to learn what pattern of visual skills would identify the more accurate inspector.

The most important of the visual skills was near point acuity and related visual characteristics. All of the employees tested who were among the best third in terms of accuracy met the minimum standard for vision. Ninety per cent of the average group met the visual standard, but one-third of the low group did not meet the minimum visual standard. All of the employees below the minimum visual standard were below average in their performance on inspecting ampoules. Of these, three were in the lowest third in accuracy and one was in the low average group. All employees who were above average on the test met the visual standards for their work. Employees selected on the basis of adequate visual skills will, as a group, do a better job of inspecting ampoules. (Now that inspectors meet these minimum visual standards the accuracy of the inspectors as a group has improved.)

The difference in performance on the job between the most accurate employee and the least accurate employee was large since she passed seven times more "bad" ampoules than did the most accurate girl. The lower third of the group passed over three times as many "bad" ampoules as did the top 37 per cent of the group.

In addition to accuracy, there is another, and perhaps more important, measure of an inspector's performance on the job. This is consistency of judgment or how often an inspector changes her mind from inspection to later re-inspections. This consistency of judgment is the more basic of the two job criteria since it is, of course, impossible for an inspector to be accurate if she is inconsistent. It is possible, though, for an inspector to be consistent and inaccurate, since such an inspector makes consistent judgments, but has too low a standard for acceptability. It is possible to make such an employee an accurate inspector through training and coaching on the level of the acceptable standard. Such errors in judgment account for, by far, the largest per cent of poor inspection. In the study the least reliable girl changed her mind five times more often than did the most reliable. The minimum visual standard eliminated only those girls who were inaccurate and also inconsistent.

From the personal information and other records we found that the amount

(*Continued on page 574*)

*Manager of Production Quality Division of the Control Department, Abbott Laboratories, North Chicago, Illinois, from a paper delivered at Production and Engineering Section of A. D. M. A., Cincinnati, Ohio.

YOU THINK IT'S EASY!

THE search for new effective antibiotics is engaging the attention of all leading pharmaceutical manufacturers at the present time. Oftimes we read in the paper of the discovery of many new antibiotics which never seem to see the light of day. In its financial report for the year 1949, made available last month, Abbott laboratories describes the steps involved in this type of research. The Abbott statement follows:

Let us take a quick glance at a typical Abbott research project—the search for new antibiotics. One of our goals is a "magic bullet" effective against *Mycobacterium tuberculosis*.

Let it be understood that new antibiotics are easy to discover, but each new antibiotic is not a "miracle drug." On the contrary, the vast majority are worthless for human therapy. Yet in all parts of the world, research workers share the feeling that it would be remarkable indeed if the first useful antibiotic—penicillin—should be the best.

Antibiotics are produced in abundance by bacteria, yeasts, molds and higher plants. Abbott alone has isolated more than 3000 antibiotic-producing organisms, and is finding 15 to 20 new ones each month. Our problem is to find the exceptional antibiotic—one that is nonirritating, nontoxic toward nerve, liver and other tissue, and yet inhibits an enzyme system of *M. tuberculosis* or some other disease-producing organism.

Molds appear to be the most prolific source of antibiotics, and the most convenient reservoir of molds is the soil. Thus, our first step is to obtain soils from as many locations as possible in this country and abroad.

Here we have a bit of soil from California, Guatemala or China. We mix it with sterile water and dilute it to about 1:100,000. Then we mix the dilution into a nutrient agar medium and pour a shallow layer into a petri dish. This mixture is allowed to grow for several days, giving the spores of various molds a chance to germinate and develop. Once they are grown, we spread a thin layer of agar medium inoculated with *M. tuberculosis* over them and put the dish away again.

When we examine the plate several days later, we find that some of the mold colonies have clearly defined rings of inhibition around them. They have produced an antibiotic substance inimical to the test organism.

We isolate one of these molds—let's call it Mold X—and grow it in pure state in a small tube called a "slant." After it has flourished on the slant, we test it to find out whether the antibiotic is really new or just an old acquaintance rediscovered. Several methods are used. One is to determine its relative activity against 10 or 15 test organisms and obtain a "bacterial spectrum." Another is to use paper chromatography, a method of separating unknown materials by means of specially treated strips of filter paper.

Let us assume the Mold X produces an antibiotic which is really new and different. We then cultivate it in small shaker flasks, test it for potency each day, and ferret out its peculiarities in relation to temperature, agitation, air supply and food. Mold X continues to be interesting, so we promote it to another stage, where it is grown in 30-liter fermenters, constantly agitated and supplied with sterilized air. These fermenters increase production a thousandfold over the shaker flasks

(Continued on page 539)

A.D.M.A.

CARLETON H. PALMER

STATING that because of progress in the communicable disease field the U. S. Public Health Service estimates the average life expectancy at over 67 years, R. Lincoln McNeil, retiring president of the American Drug Manufacturers Association, told members at the recent annual meeting that the medical spotlight has been turned to the so-called "aging" diseases of the geriatric field. Heart disease, cancer and cerebral hemorrhage are now the three leading causes of death, he said, heart disease and cancer accounting for nearly one-half of all deaths. "Obviously, part of this increase can be attributed to improved methods of diagnosis and of reporting vital statistics," said Mr. McNeil. "Also it indicates more widespread utilization of our nation's medical facilities.

"Nevertheless, these statistics outline the most fertile areas for a continuation of our dramatic progress in medicine. In fact, we are already on our way. Largely through the efforts of certain of our member-firms, cortical steroids have been made available to our medical researchers who have demonstrated them to be very useful in the rheumatism-arthritis field. Further research is expected to carry these compounds into the cancer field and perhaps into a host of other ailments. Spurred on by the dramatic reports on ACTH and cortisone, many of our member-firms are engaged in intensive research activity, both in chemical laboratories and in collaborating clinics. Eventually out of this competitive activity may come great benefits for some of those suffering from long-lasting and hitherto incurable disease.

"Our laboratories are constantly seeking newer and

BOCA RATON

better drugs which will be effective against infections that are not susceptible to penicillin and other available antibiotics or earlier chemotherapeutic agents. Our industry is already well started on the development of a new series of newer antibiotics—Aureomycin, Chloromycetin and Terramycin are here, and others are en route. With this series we now have our foot in the virus door, which makes the outlook much brighter for eventually finding something that will be effective against poliomyelitis."

Illustrating that private initiative still has, in this country, the opportunity to prove the fallacy of the hypothesis that government management can do the job better, quicker and more efficiently than private management, A.D.M.A. Executive Vice-president Carson P. Frailey said that member-firms "are risking considerable sums of money without any guarantee other than the possibility that they will be in a position to compete for the rewards which will go to the successful. Because the potential rewards are great, the stakes and risks are high, but that is one of the fundamentals of the system." Dr. Frailey continued:

"Last summer, shortly after the dramatic developments of cortisone and ACTH were widely publicized in the lay press, official Washington was deluged with letters from well-meaning citizens demanding that the government 'do something about' providing these materials for the thousands of people who are suffering from arthritis and rheumatism. While a vast majority of American citizens may proclaim adherance to the private initiative principle, yet when faced with a difficult personal problem they too often turn their eyes to the government. In fact this insidious disease sometimes infects even our business and industrial community.

"Fortunately for the sufferers from arthritis, rheumatism and other ailments, the members of our industry who were responsible for these original and dramatic developments had been doing such good work on their own initiative that the government wisely chose to leave the job in their hands. In this way the driving force of competition was harnessed to the tremendous problems involved in getting effective drugs tor the relief of these ailments to the people in the shortest time."

Another outstanding result of private initiative illustrated by Dr. Frailey is the development of an ampoule inspection machine. Dr. Frailey said:

"So far industry has to depend on trained inspectors to examine each ampoule with the human eye in an effort to determine the presence of minute particles. At best this is a very inexact procedure. It depends too much on subjective human reactions and frailities. Ampoules that pass at one time might fail to pass at another—ampoules that pass one inspector might not pass another. In fact, appearing before a court, the outstanding government expert in this field was unable to duplicate his results on re-inspecting the same bunch of ampoules. Happily, I think this situation will soon improve, due largely to the mechanical genius of one of our outstanding firms in the electronics field. About five years ago, RCA-Victor offered to undertake research looking toward the development of an electronic inspection machine. The project was sponsored by 16 members of our industry.

"The machine performs better than human inspectors in discarding ampoules which contain particles. In fact, if it cannot make up its mind on the first inspection, it will retain the ampoule and look at it again before rejecting or passing it. The money to finance the long and painstaking research required to develop this apparatus was furnished through voluntary contributions from the following firms.

"Abbott Laboratories, Bristol Laboratories, Ciba Pharmaceutical Products, Hoffmann-La Roche, Kimble Glass, Lederle Laboratories, Eli Lilly & Co., Merck &

(*Continued on page 607*)

By Harry Hilfer

SOLIDIFIED FRAGRANCES

OF CURRENT interest are perfume specialty preparations in solidified form which have much the same function as do the better known liquid preparations, but which present a novel approach towards application. Preparations of this type are not new. In the past there have been presented salve-like preparations of essential oils in lipoid bases as well as powder cakes and sticks in which were incorporated a fair percentage of essential oils. None of these preparations seem to have created a permanent place for itself in the cosmetic market, but by gradual evolution have led to the introduction of the solidified alcoholic preparation which at this writing is enjoying a popularity which seems to be of more than passing interest.

The present form may be made in any one of a number of ways. It is basically a gel and therefore contains a gelation agency. It also contains high concentration of alcohol and therefore must be packaged so that evaporation could be reduced to a minimum. They also should have incorporated in them a non-volatile solvent such as a polyhydric alcohol so that the film could be prevented from drying too quickly during the application period. The solvent also has another function in that by its introduction it is possible to add higher concentrations of gelation agencies so that the preparation could better withstand high summer temperatures and at the same time be easily applied at normal room temperatures

Gelation agencies are usually soaps and since it is

desirable to keep it at minimum, hard soaps are generally employed. The most widely used is sodium stearate, since stearic acid is easily obtainable and fits the specifications very well. In a choice of stearic acids, the amount of unsaponifiable matter would be of primary importance since an appreciable quantity of such impurities not only interferes with gelation efficiency, but introduces an undesirable opalescent cast. The presence of any marked amounts of oleates would also be undesirable because they also would interfere with gelation. There are now available, in addition to the usual triple pressed stearic acid, which seems to perform the function very well, stearic acids made from hydrogenated oils which may also be used. Actually, these latter usually contain a higher concentration of stearic acid and lower concentrations of palmitic acid than does the better known triple pressed stearic acid. We may, therefore, expect better stiffening properties from the hydrogenated fatty acids, and superficially at least would appear to be the more desirable to use. However, if the sought-after product is one in which a transparency is a desired property, the use of the purer stearic acid may defeat this purpose. This can be explained by the much greater solubility of palmitic acid soaps as compared to stearic acid soaps, with subsequent greater precipitation of the sodium stearate causing greater cloudiness. This explanation is not completely adequate since the gelled system is a highly complex entity, and since it gels as it does, may no longer be considered a true solution. Actually it could be regarded as a system consisting of thin-walled cells, which is the soap with the alcoholic solution contained within these cells. The cell walls, which may be regarded as the soap, are therefore not in true solution. Soaps of greater solubility would be incapable of forming the walls, while soap of lesser solubility would either be inert or produce walls of so great a thickness that they would appear opaque.

In addition, soaps of great purity have a greater tendency towards crystallization than do mixed soaps. Formation of these crystals would further cause increased opalescence.

There are, however, modifying factors which may be employed. One of these would have to be present—this is the essential oils and the second is the addition of a polyhydric alcohol. Polyhydric alcohols such as glycerol, ethylene glycol, propylene glycol or their polymers are better soap solvents than are the monohydric alcohols—in this case ethyl alcohol—generally used. Their introduction would therefore cause increased quantities of soap to go into solution. This in itself does not appear desirable since a micelle structure is desired, but by the presence of the reserve supply of soap two deficiencies are overfed. The rigidity of the stick is not as readily effected by an increase in temperature, making the product capable of better withstanding midsummer extremes, when it incidentally enjoys its greatest use. This is in addition to a more desirable evaporation rate imparted to the film on application.

It secondly sets up a compensating system which becomes self-correcting as the alcohol evaporates with each exposure of the stick during its use. This point requires greater elaboration to be well understood. A certain amount of water is needed in the system to allay the effects on the skin of too concentrated ethyl alcohol and to further serve as a solvent for the caustic soda needed to form the soap. On evaporation the ratio of alcohol evaporating as compared to water would be greater than the ratio alcohol to water present in the product. A change in this water alcohol ratio in this direction would cause greater opalescence in the stick. A non-volatile solvent such as a polyhydric alcohol which does not evaporate would, however, increase in concentration and therefore correct for the alcohol lost.

The use of a polyhydric alcohol would, therefore, maintain any desired degree of transparency even with evaporation, which cannot be controlled. In addition, it also serves to maintain a proper solution of the essential oils by compensating for decreasing solubility with decrease in alcohol concentration, by itself increasing in concentration with evaporation of alcohol and therefore maintaining the proper conditions for oil solubility.

The gelation agents need not be limited to the use of soaps. Ethyl cellulose could be employed to advantage as could other available substances. Soaps were chosen merely as a means of illustration. Certainly there are a number of alcohol soluble substances with varying viscosity imparting functions to allow for good results if this direction were followed.

If a soap is employed in the formulation, the best method of manufacture would appear to be to first dissolve the stearic acid in the alcohol and polyhydric alcohol by heating the mixture under a reflux condenser so that none of the alcohol is lost through evaporation. A steam jacketed kettle would be best for this operation since the alcohol would have to be heated almost to its boiling point to effect quick evaporation. An aqueous solution of sodium hydroxide in as close as possible molecular equivalent to the stearic acid may then be added. After a thorough mixing the solution may be allowed to cool and the essential oils added just before it is ready to be poured into moulds.

The method of moulding also would have a bearing

(*Continued on page 600*)

MANUFACTURE OF TABLETS

PART III — PLANT LAYOUT

By Ronald Clarkson
TABLET CONSULTANT

IN THE previous articles I described the manufacturing process and the equipment necessary for carrying out the various operations in order to manufacture compressed tablets.

The next question is how to set up an efficient manufacturing plant—the type of building required, the room needed, the kind of floors, and finally the actual plant layout.

The natural question is what constitutes a good layout. A good layout is one that will provide for a smooth flow of materials and operations in such a manner that maximum efficiency is obtained from both equipment and operating personnel. A lot of people will say the above definition is all right when you are referring to a highly mechanized plant complete with conveyors, push buttons and electronic controls, but you can't make a tablet plant work that way.

This might come as a surprise, but you definitely can produce tablets by a continuous automatic system, provided the volume is sufficient to justify the investment.

I am very well acquainted with a large tabletting operation, using the wet granulating method, that is turning out tons of tablets per day. I would say that it is about ninety per cent automatic and I see no reason why someday it could not possibly be one hundred per cent. I must qualify the above statement by telling you that this operation is not in the pharmaceutical industry although I feel that it might be possible to adapt some of the principles to large volume items.

The slugging or double compression method, which I discussed in the first article, can readily be set up along these lines if so desired. Again investment must be balanced against production requirements.

Generally, the manufacture of pharmaceutical tablets is a series of batch operations, due to the diversity of formulas and wide variation in the size of batches. I will therefore confine my remarks accordingly. The point I am making is that even with a series of batch operations they can be made to flow smoothly and the equipment can be arranged so that time and effort are utilized to the best advantage.

For the most part my efforts have been directed toward remodeling existing tablet plants to increase production and improve working conditions, also to installing and putting into operation new tablet departments in plants already established in manufacturing, liquids, ointments or other products. Quite often the amount of space available is strictly limited and some real problems arise. More than once I almost started a minor revolution in an organization, where I was called in to remodel the tablet department, because I insisted on moving some other department to a different location and setting up the tablet department in the space vacated. In such cases, in order to win a final decision, you have to compare the profits the different departments are producing and what the future holds and then proceed accordingly.

The questions uppermost in the minds of my clients have been, when first we met, how much room do I need and where should I locate this department? There is no quick answer to this question. A number of factors must be taken into consideration before making the final decision.

Assuming that you are starting out in the tablet business—first of all development work is necessary to work up the formulas and manufacturing methods. From this information you figure the size and type of equipment necessary to meet the production requirements. You are then in a position to figure the space required and then decide on the location. All these factors are integrated and worked out together as the project gets under way.

Everybody hopes that the sales of their particular products are going to increase in the not too distant future and accordingly increased production requirements should be anticipated. In specifying the type and size of equipment I always consider this potentiality and in so doing have saved several of my clients appreciable sums of money. In more than one case two or three hundred dollars extra at the time of the initial investment saved a thousand or more later on. Even taking these factors into consideration the time may come when additional equipment must be installed, therefore the space decided upon should be expandable.

Usually it is a good idea to locate a tablet department above the ground floor to obtain better air circulation, as tablets should be manufactured in a dry atmosphere

as far as possible. If located on the ground floor damp pockets are often present and moisture stays in the room, whereas at higher elevations the same degree of humidity would soon be lowered by improved circulation. The ground floor is generally used for receiving and shipping department.

Before making any decisions check the floor load. This is important. Tablet machines, particularly the large heavy duty models, are pretty husky chunks of iron concentrated on a relatively small floor space and it would be a very unpleasant surprise suddenly to see such a machine take a nose dive through the floor.

It is well to remember that tablet machines generate a certain amount of vibration, especially if they are being run at maximum operating pressures. The degree of vibration and consequent noise depends to a great extent on the type and construction of the floor. For instance, on reinforced concrete it is not too bad, but on some of the older type buildings having wooden floors the noise can become quite annoying, particularly, to the people working on the floor below.

There are several types of vibration dampers available. They are not all adaptable to tablet machines, but after considerable research into this problem I found one or two types which gave excellent results.

The amount of floor space required and the space available should then be figured. Knowing the size and type of the various units it is a simple job to determine these figures. Head room or ceiling height is also important, that is if you contemplate installing exhaust or dust collection systems, which definitely should be given consideration. It is essential that you have a fairly high ceiling to permit proper placement of the ducts and also to provide adequate head room for the operating personnel.

The same requirement is necessary when considering dehumidifying equipment, which is rapidly gaining favor and in my opinion is a good investment, as it permits satisfactory and standardized operation on all products the year around.

You now have determined to your satisfaction the location, floor loads, floor space and ceiling height. The next step is how to lay out the various departments and arrange the equipment.

Arrange them, if possible, so that raw materials enter at one end and finished products go out the other, to eliminate unnecessary trucking back and forth through the departments. The departments should be divided as follows:—Chemical Stock, Granulating Department, Compressing Department, Coating Room and Polishing Room. Packaging and Finishing Departments follow, but these need not be included in the above grouping unless floor space permits. In most plants the packaging operations are carried out on a separate floor, due to lack of space. If floor space permits by all means set up these departments on the same floor and package finished tablets as soon as possible.

Always make the main traffic aisles of sufficient width, so that trucks can be maneuvered without bumping equipment and the other operator's shins.

A very important point to remember is to allow sufficient space around each machine, so that adjustments and servicing can be accomplished. If an operator has to squeeze in between this machine and lean over that machine to oil a motor or lubricate some other machine it's a pretty safe bet to figure that he will miss his mark.

This may sound very elementary to some of my readers, but nevertheless it's true. I could name more than one plant where the tablet machines were packed in like sardines and the aisles were so narrow that if you leaned over on one side to adjust a machine you would almost be catching tablets from another in your hip pocket. Houdini himself would have had a job to climb in and service some of the machines. Machines packed too closely together not only suffer from lack of care, but constitute a hazard to the operators.

When laying out the various machines try to arrange them so that they produce a symetrical appearance and also save unnecessary steps between the various operations.

The dryer is a little different. Generally this piece of equipment takes up a considerable amount of space depending on its capacity. If it is of the truck tray type and is designed to load from one side only it is satisfactory to place this along a dead end wall or in a corner. Some dryers of this type are made to load from both sides, in which case sufficient room must be allowed for maneuvering the trucks.

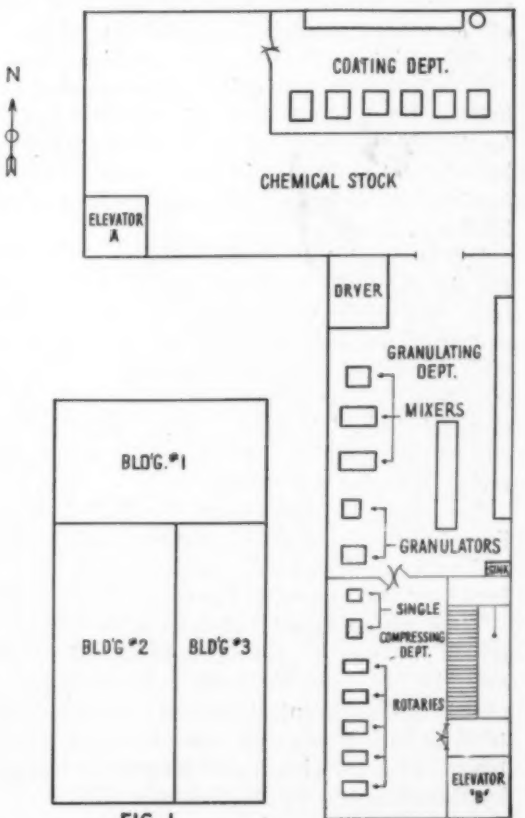


FIG. 1

FIG. 2

VAN PELT & BROWN INC.

The actual arrangement of the equipment depends on the size and the number of machines, floor space available and shape of buildings. It would be difficult in the limited space of this article to go into all the details concerning the factors to be considered in order to produce an ideal layout, if there is such a thing. Rather than present a lot of do's and don'ts, it might be more interesting to describe a few actual tablet manufacturing plants.

To simplify matters I have restricted the floor plans to the basic elements and through the courtesy of my clients I am able to furnish photographs of these installations, which should give a clearer picture as to the appearance of the finished job.

As the first example let us consider the plant of Van-Pelt & Brown, Inc., Richmond, Va. an up and coming ethical house. This business, like so many pharmaceutical manufacturing concerns, was born in a retail pharmacy owned and operated by H. W. Brown—the president of the company. It soon became necessary to find larger quarters in order to expand the manufacturing facilities. Building No. 1 was purchased. After a few years increased sales and expansion of the line demanded more space and buildings No. 2 and No. 3 were successively acquired, thus providing sufficient space to set up an expandable plant. Fig. 1 shows the arrangement of the buildings, which now constitute the plant.

Breaking through the walls at strategic points permits easy access between the buildings and as the walls are of heavy brick construction installation of fire doors at these points provides excellent fire protection.

As buildings No. 1 and No. 3 are five stories, whereas building No. 2 is only four, the fifth floor was chosen for the tablet department. Building No. 1 was the most logical situation for chemical stock department, as it is furnished with elevator "A", which also services the loading platform.

Raw materials are unloaded from trucks directly into the elevator and transferred immediately to the fifth floor, thus eliminating congestion in the receiving department. Incoming materials are all dated and held until the control department has conducted the necessary tests. After approval they are then placed in chemical stock. The floors of No 3 building, being of concrete construction, were chosen for the granulating and compressing departments

Raw materials drawn from chemical stock are delivered to the granulating department with a minimum of handling. Completed granulations are then transferred to the compressing department for the final step.

These two separate buildings, with the use of a second elevator "B", permits finished tablets, with the exception of those to be coated, to be transferred to the packaging department situated on a lower floor without trucking back through the other departments Coated tablets, when completed, are transferred to the packaging department by means of elevator "A".

The granulating and compressing departments are completely air conditioned to maintain a uniform relative humidity for satisfactory year round operation. A separate unit is provided for the coating room as it is not in constant use.

Observing the floor plant Fig. 2 you will notice that for the most part operations flow in one direction and that the plant is expandable. Additional machines can be installed in either department by placing them along the opposite wall and still leave a wide aisle. Also note that plenty of room around the machines for cleaning and servicing has been provided.

Additional air conditioning facilities recently installed will provide satisfactory operating conditions throughout most of the plant, including the control and research laboratories, packaging department, office and shipping departments. Many people might consider it extravagant to condition the shipping department, but it is my opinion that it is a wise step. Humidity especially along the Atlantic Seaboard during the summer months, at times becomes almost unbearable, so that not only will the personnel be working under comfortable conditions, but output per person will be accelerated. It is surprising how production can be maintained or even increased by improvement of working conditions.

Fig. 3 shows a view of the granulating department. Fig. 4 the compressing department.

Figure 3 (above)

Figure 4 (below)

(*Continued on page 592*)

THE ARTHRITIS DRUG FRENZY

THE excitement created by the final discovery of Compound E, or Cortisone, which was originally sought after as a drug for the relief of arthritis, has not as yet resulted in large quantities of cortisone flowing to arthritic sufferers, but has indirectly caused the marketing of other steroid hormone products which are effective to varying degrees in the relief of arthritic symptoms. Cortisone now appears to be a product to be studied as a guide to the possibility of producing other products for the treatment of diseases apparently caused by lack of secretion of one or more types of steroid hormones. ACTH, the steroid hormone product produced by Armour Laboratories and now to be produced by Wilson Laboratories, is in a similar position. As an indication of this point of view, Dr. John H. Glynn, assistant manager of the Armour Laboratories, recently said that ACTH has great value, "by using it as an investigative tool, something else in abundant supply may be used in its place." But the great importance of these hormones was summarized recently by Dr. John R. Mote, of the Armour Laboratories, who said:

"The picture that is developing is that the adrenal gland plays perhaps the major role as to whether or not a person is sick or well, regardless of the illness or the cause thereof. In other words, the person with an adrenal gland that can adequately react to various types of stresses, be these infection, trauma, emotion, or internal environmental stresses, remains well, whereas the person with a 'mal-functioning' or 'mal-stimulated' adrenal gland eventually comes down with anyone or more of an almost unlimited variety of diseases.

"It is the results to date, and a forecast into the future, that leads me to say that the discovery of the role of the adrenal gland in health and disease has probably opened up the largest area of medicine that has been opened up since the discovery of bacteria. In consequence of this fact, it will probably take decades to work out the details of the true cause and prevention of the numerous diseases which afflict the population of the world today, and when these ends are accomplished, it is my conviction that a new type of medical teaching and a new type of medical practice will have evolved."

While the manufacturers of cortisone and ACTH have been increasing their production as rapidly as possible, and have been restricting available material to investigative channels, with the beginning of this year they stopped free distribution of the products for this purpose. After all there is a limit to the amount which these firms can spend in the development of products of extremely high cost and with no guarantee of sufficient supplies at a sufficiently low price, or of sufficient lack of side-effects to permit their wide-spread use. Reports are to the effect that the side-effects being observed in the application of these products are a most serious detriment to their continued use. However, even though use of cortisone in a daily dosage of 100 milligrams per day for control of rheumatoid arthritis might not be feasible, this drug, as well as ACTH are still under close observation as to their value in the control of still other diseases.

Studies are continuing of the use of these drugs in rheumatic fever and a group of related chronic diseases are often fatal and for which there has been no known effective treatment. One of these is a severe and usually fatal disease of the skin and various organs of the body, called disseminated lupus erythematosus. Others are scleroderma and dermatomyositis, also mostly incurable and fatal. Encouraging results have been obtained against leukemia, the cancer-like disease of the blood, and highly promising results have been achieved in asthma, ulcerative colitis, certain kidney diseases, gout, psoriasis associated with arthritis, and Addison's disease, a severe condition due to destruction of the adrenal glands.

In the meanwhile, other products of the steroid hormone type are being offered for the control of arthritis. For the most part, these products give varying results depending upon the type of arthritic condition in which they are prescribed. And while they do not give such complete control of all cases of arthritic conditions as do cortisone or ACTH, the side-effects are not much of a problem. Furthermore, these products are more freely available and they are considerably lower in price. Also, as more of these different products are developed and marketed, the physician will have a choice of products giving him a greater opportunity to bring relief to arthritic patients whose diseases vary widely in basic cause.

One of the products of this type now being offered is pregnenolone which is being offered by several firms. This has long been produced by Schering as an intermediate in synthesis of progesterone, and lately it has been changed to the status of a primary product so far as that company is concerned. Pregnenoline is also being produced in Mexico from a vegetable sapogenin obtained from an inedible root of a plant

(*Continued on page 598*)

INSURANCE MEDICINE COMPANY
A THOROUGH CONSTITUTIONAL TREATMENT OF TWELVE WEEKS
PRICE ONE DOLLAR. AKRON, OHIO.
$500.00
$500.00
FIRST WEEK
SECOND WEEK
THIRD WEEK
FOURTH WEEK
FIFTH WEEK
SIXTH WEEK
NO PILLS—NO TABLETS
Five Hundred Dollars
Life Insurance
In Case of Death if You Use This Medicine
A Guarantee Policy good as Gold for Five Hundred Dollars in case of death, in every box of our medicine, which contains Twelve Weeks' Treatment and costs only One Dollar.
Issued as an evidence of good faith showing our confidence in the curative power of our medicine for certain diseases.
We simply defy disease if given a few weeks' trial and do not hesitate in issuing the above Guarantee when we know the power this medicine and treatment has over DISEASE, WEAKNESS and DECAY.
AND YET WE USE NOTHING BUT VEGETABLE AGENTS
"In his able work entitled 'Longevity' published a few years ago, Dr. John Gardner, of England, predicts that a vegetable agent will yet be found that shall so retard those changes that bring about old age as to prolong human life much beyond its present limit."
THE WORLD HAS WAITED A THOUSAND YEARS FOR THIS.
See other side for Medicine and Diseases.

BETTMANN ARCHIVE

ADVERTISING PHARMACEUTICALS

By ALBERT J. WEISBRODT
DAVIS & GECK, INC.

THERE probably isn't a pharmaceutical company executive who hasn't been disappointed with the sales performance of one or more of the new products introduced by his company. Everyone, I am sure, has had a new product which was launched with all the fanfare accorded a United States aircraft carrier only to have this product come limping home a short time later. Obviously, there are a number of reasons why a new product fails, but we are not concerned with all of these reasons at the moment. Assuming everything else is right, we are concerned with *advertising* the new product. That a new product can fail because of the lack of proper advertising and promotion is, I believe, a point on which all are agreed.

If you will examine the activities of those companies who have achieved a reputation in the field for the successful handling of new product promotions, you will find several things in common in their advertising and promotional campaigns.

For Instance you will find:

1. A Central "Sales Idea."
2. "Uniformity of Presentation."
3. The Promotion Pretested.
4. Split-Second Timing.
5. They "Overwhelm" the Physician.
6. Advertising Behind the Advertising.

1. A Central "Sales Idea"

The "sales idea" is not a matter of describing the product and telling what it is and what it is for. The "sales idea" is that point of major emphasis that tells the physician what the product will *do* for him and how it will do it *better* than similar products. If you will examine the successful new product promotions, you will find that those qualities or characteristics of the new product are featured that other similar preparations do not have or at least do not make known to the best advantage. Please bear in mind that it is not always possible to find outstanding product superiorities that other preparations do not have. Therefore, it becomes necessary to build the basic sales idea around that characteristic or feature that competitors do not use or at least do not make known to the best advantage. Real artistry is at work when a product with no apparent therapeutic or economic advantages over competition achieves dominance in its field.

Examination of many new drug promotions will soon convince you that there is no real "sales idea" at work. To dig deep into a product and a market is a real job and calls for no little ability in the development of sales ideas. How much easier it is just to talk product, to tell what it is and give the indications. At least half of the advertisements in any given issue of the J.A.M.A. are of this type . . . and, no doubt, the rest of the advertising materials follow a similar pattern.

Remember that the successful advertising campaign nearly always represents an idea—a something about the product being exploited that outweighs the something brought out in the exploitations of competing products. To illustrate the point, here are a few ideas that are in current use:

1. Roche's Thephorin AC—Common cold therapy . . . *without* drowsiness.
2. Searle's Metamucil—The "smoothage" management of constipation.
3. Wyeth's Amphojel—Double action with a single purpose.
4. S.K.F.'s Benzedrex Inhaler—So much better that we have discontinued "Benezdrine" Inhaler.
5. Abbott's Duozine—Medicine that tastes like candy.

Don't forget that the most important aspect of your whole program may be the "something" about your product that makes it more effective, or better, or easier for the doctor to use. Develop a basic sales idea as your promotional power plant and use it at every opportunity.

2. "Uniformity of Presentation"

"Uniformity of presentation" is of *extreme* importance, for without it an organization is, in effect, dividing itself into a number of smaller, uncorrelated units. Without uniformity of presentation you cannot expect to compete on an equal footing with other companies your own size or even smaller. It is on this particular point that you can increase your promotional punch to a degree that will surprise you.

Uniformity of presentation implies several things. It implies that your detail staff is telling the same story, in the same way, at the same time, developing the same idea as your advertising. Too many detail staffs are given detailed product information covering every aspect of its laboratory and clinical development, its chemical and pharmacological background, and then allowed to develop their own presentations which may not only be different from the advertising but different from every other representative in the organization. Some companies are so insistent on uniformity of presentation that they require their representatives to *memorize and use* a basic detail. The people at headquarters develop a presentation which is the best they can make it, and then they insist that the sales staff use it. The object, of course, is to increase the effectiveness of the whole sales staff, and to increase the total effectiveness of the entire campaign through uniformity of presentation.

There are other aspects of the campaign that must also have this uniformity of presentation. The same basic selling idea should be incorporated in the designing of samples. The same basic selling idea should be used at the hospital and medical exhibits. The same basic selling idea should be used in all contacts, verbal or printed, with the wholesalers and their salesmen, hospitals, retail pharmacists, nurses, and in fact, anyone and everyone who plays a part in the sales and distribution of the new product.

(Continued on page 578)

Delivered before the American Pharmaceutical Manufacturers' Association. (Sales and Advertising Section) Hotel Roosevelt, New York City, February 15, 1950.

PRICE plus Perfection is the Challenge

I L Miniature-Pak for unit dose or day's demand—1 to 9 tablets or measured powder in various sized packages and indicated materials.

Here is the Answer

You can cut costs and still have a perfect package—I L Miniature-Pak is not only the lowest cost package in the world—it is a complete unit—protective, attractive, convenient—a small edition of your established package with located design and instructions complete on front and back. Check the specific advantages this package offers. Then ask us about I L Miniature-Pak for your product. You can meet the price challenge without loss of product protection.

IL MINIATURE-PAK

- ✔ Complete package lowest cost.
- ✔ Ideal for creams, powders, capsules, tablets, granules, triturates and unusual products.
- ✔ Positive product protection with proper packaging material.
- ✔ Exact miniature facsimile of your established sale package.
- ✔ Proven a practical package by millions already in use.

Write today for pertinent information.

SANITAPE THE SEAL OF PACKAGING PERFECTION SEALTITE

IVERS-LEE COMPANY, NEWARK, N. J.

Sanitape-Sealtite is a unique method of packaging pills, tablets, creams and powders, by which each unit or unit dose is sealed in its own airtight compartment surrounded by a crimp flange assuring complete protection and maintained efficacy. Packages, machines and methods covered by U. S. and foreign patents and patents pending. Available only through the Ivers-Lee Packaging Service. Infringing imitators will be subject to legal prosecution.

PACKAGING AND SELLING

RETAIL DILUTION

Some day the cosmetic industry, both manufacturers and established retailers, will have to face the issue of retail dilution. It is becoming increasingly clear that more retailers of various kinds are establishing perfume and cosmetic departments, and the total of all these new retailers added to the vast number already selling perfumes and cosmetics means a dilution of the total retail sales of these products to a point where there just isn't enough to go around.

In addition to the department and specialty stores, independent durggists, chain stores and variety stores, we have a large number of country, general stores and a limited additional number from such groups as beauty parlors, jewelry stores, etc. Nearly 200,000 stores have been retailing the current volume of $780,000,000 worth of cosmetics and perfumes. However, in the last two or three years a very substantial number of grocery super-markets have added cosmetic departments and in some of these chains this department has been made one of the major features of the store. It is estimated now that over 60 per cent of the super-markets are selling cosmetics to some degree.

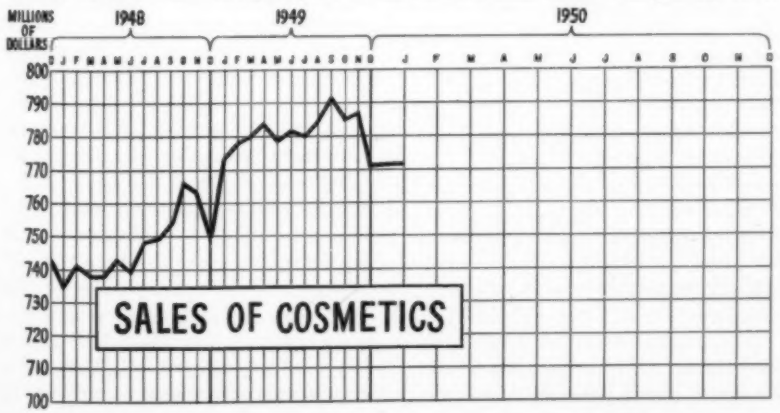
Just recently one of the best-known department store buyers in the country, that is Wendell Smith, for many years cosmetic buyer in Hudson's, Detroit, has been employed by the Schulte Chain to establish a cosmetic department in their stores, a type of store until recently identified with tobacco products. Substantially more important in developments of this kind is the recent announcement of the American Stores Company that they would install a perfume and cosmetic department in 1,000 of the Acme self-service stores located primarily in the Eastern states.

It would seem inevitable that this expansion in cosmetic distribution, which is certainly not generated in the slightest degree because cosmetics are not quickly available to every kind of consumer, no matter where she lives, or because cosmetics lack an adequate distribution for any type, class or price range of products, will shortly bring a loud explosion from some part of the traditional and established retail trade.

It would almost seem that this new development in cosmetic retailing reflects an opinion among certain classes of retailers that perfumes and cosmetic have reached the status of an every-day utility that could be moved from the store without the necessity of personal selling. This perhaps is the fundamental issue yet to be decided, and it may be that the decision will favor a split personality for the industry, so that two groups of parallel products will arise, which so far as distribution goes will be practically non-competitive.

Aside from this it remains to be seen whether this large number of new retailers displaying cosmetics will add to the total volume of the industry and make it possible for this new enlarged distribution to continue, or whether there will be a process of dilution of the current sales volume of the industry's products, resulting in reduced volume to a majority of the retailers so that many stores will be compelled to abandon these products as an unprofitable department.

Retail sales of cosmetics for the twelve months ended with January 1950 amounted to $770,918,000. This compares with $770,794,000 for the twelve months ended with December 1949 and with $773,231,000 for the twelve months ended with January 1949.



Too Fancy Package

Retailers, according to a survey just made by the U. S. Department of Commerce, are turning against the too fancy package of many manufacturers. According to this survey, many products that are not in the luxury or lush class are being packaged in extravagant ways that are interfering with the sale of the product.

Many retailers currently believe that just as good looking a package with just as much over-the-counter sales appeal can be obtained with a great deal more simplicity and this would win the confidence of many people who have gotten the impression that too large a percentage of the price is included in the package. Several months ago we commented on our own experience in a case of this sort.

The occasion for this comment happened when we bought a new model of an electric safety razor of the same brand that we had been using for quite a number of years. This was a pure, utility purchase of a product already in use. It was therefore very annoying to discover that this razor was packaged in

an extremely expensive rigid, jeweler's box which certainly entered into the retail price of the razor at a minimum of a dollar. There was no reuse value in this box and the purchase of this razor entailed almost immediately the throwing away of more than a dollar.

Even in the perfume business where the originality and beauty of the bottle design has always been considered a must and where very often, even in expensive perfumes, the price that the consumer pays for the bottle exceeds the price she is paying for the perfume, there is reason to believe that this beautiful, original container may sometimes be a sales hinderance because the customer recognizes just where her money is going.

It should be worth some thoughtful consideration that in perfume packaging perhaps the least lavish of all packaging is the three biggest sustained sellers, that is Chanel, Tabu and the odors of Faberge. These are all delivered to the public in a severely plain, standard bottle with an equally severe, plain paper box.

Multiple Selling

Multiple selling isn't the special problem of the cosmetic business, although in all probability it is more widespread and more progressively multiplied here than in any other industry.

According to L. M. Cassidy, the vice-president of Johns-Manville Corp., "We are in an economy of specialization. Multiple product selling was fine in some cases, but it can become very expensive. A multiple line salesman may find himself at a serious disadvantage with a competitive specialist. In the case of a good established business, it is surprising how little added volume is required to pay for more salesmen or more specialization, or a combination of both." "Specialization," he added, "may be vital to competitiors for the new vast markets created by trends during and since the war."

The cosmetic business has been reaching out toward the end limits of multiple selling. Very few manufacturing companies are left today whose reputation rests upon a highly specialized product. At the moment we can think of very few, but would certainly mention Pacquin and Noxzema.

The basic weakness in this multiplication of products and selling is that very few of these fringe products are based upon original research and have any characteristic that distinguishes them from many competitive products and very few are in response to any apparent need for such a product from the consumer's view-point.

The vast majority of these surplus cosmetics, which have been heaped and piled upon the trade, are simply and solely created with the hope and expectation that they would provide a little extra business to help pay a demonstrator's salary, or that they would provide a little extra business to help pay salesmen's remunerations and expenses.

Mr. Cassidy opens up the very pertinent question as to whether a salesman with the right kind of single product, properly promoted, would not be in the position to do better than a salesman so loaded down with a variety of items that he is either reduced to the status of a wholesaler's salesman, or he is forced to take the position of simply concentrating on one or two profitable items to the complete neglect of everything else in the line at any one particular retail list.

Fragrance in The Home

It should be worth some thoughtful consideration by those people in the perfume business and in other branches of the industry marketing fragrances that the present listless condition of their business may be caused in part by the fact that the fragrance industry is very definitely not a growth industry. The usual conception of a growth industry is one that through dynamic research or some other form of virile and aggressive development has a rate of growth that substantially exceeds anything that would come to it through the normal addition of population or purchasing power in this country.

An excellent example of growth in this industry is the ethical pharmaceutical manufacturing group, where a series of brilliant research developments has greatly accelerated normal growth, so much so that something like 50 per cent of the business of many companies in this group is on products that were not in existence a relatively few years ago. Many other industries have had this same plus expansion generated by alertness in research, new production methods or imaginative marketing.

For instance, the almost infinite uses to which rubber is now put would have seemed strange and impossible just a few years ago when this was an infant industry committed largely to footwear, water proofing and transportation.

However, the fragrance people, particularly the packed fragrance people, have been largely immune to entertaining any thought that their market could extend beyond the application of their product to the human body. It is true that a couple of the companies producing and compounding aromatic substances have shown imagination and vigor in pursuing an industrial market for odors, but by-and-large it can be said that the entire fragrance industry and all its branches have been among the least alert of American industry in exploring possible ways to broaden their market.

As an example that there is nothing at all theoretical about the opportunities open to this industry, a recent bulletin of the Fragrance Foundation points the way to a large unexplored market for fragrances that has tremendous potentials, that is the use of fragrances in the home. It is true that this is not entirely a new idea, because in the past we have had such things as perfume lamps, incense burners, the various forms of household plaster dispensers and other gadgets, but the thought and effort put upon this subject by the industry and particularly by the leading manufacturers have been, to say the least, something less than trivial.

If the use of a fragrance in personal application to the body is a source of satisfaction, or an invitation, or the suggestion of a cordial welcome, or anything else that a perfumer might conceive, to the tune of something like $60,000,000 at retail prices, why isn't this same personal satisfaction just as welcome when applied to the home?

The Foundation mentions specifically a number of ways in which fragrance can be used in the home. For instance, there are many ways in which sachet can contribute to the home. It is used stuffed in corners of the sofa or overstuffed chairs and in numerous other ways, ways yet to be explored, and is about as reasonable a sales objective as any one can imagine. Spraying toilet water or cologne on the bulbs of lamps, so that when heated the room is pleasantly scented, or spraying the clothes closet or the walls and ceiling, or carpet, or any other application is equally reasonable and an intriguing opportunity for a good advertising man to revel in. What could add more to a gracious dinner than the very simple addition of a few drops of toilet water or cologne in the finger-bowl.

The fragrance industry is listless at a time when we have more people employed than at any other time in the history of the country, at a time when these people are earning more money in

every classification and spending more money at retail and are piling up a national income which last year reached the peak of all time.

The Fragrance Foundation was founded because of the startling discovery of the elementary true fact that the American woman is using a disgracefully small amount of fragrance products. Perhaps the Foundation has found a way to expand the use of fragrances that will produce quicker results for the industry than a long-term educational process to persuade women to use them more often and more lavishly on their bodies.

Rush for the Bandwagon

The deodorant soap provided a new sales theme which everybody now knows clicked in a dynamic way just about the time toilet soap sales were beginning to decline. Now several new products based on this same theme are entering the market in an aggressive way, and the big wonder is that it took other people in the soap business so long to catch on and get started.

Charm, a Packer's Tar product, and Fresh, a Pharma-Craft product, are both on the market and have underway substantial advertising campaigns. Vhex a several months old product by the Hewitt Soap Company, is seeking drug and department store distribution, but has not yet entered the tussle of big national advertising.

Normally in the cosmetic business it takes very little time for perfume or cosmetic companies to jump on the bandwagon when any one manufacturer shows signs of hitting a home run with a new product. The recent epidemic of solid colognes, based on the use of solidified alcohol, is an example.

Many cosmetic companies have one big advantage in detecting and getting quick action with a new product which shows real popular appeal, that is the demonstration system which acts as a trigger-quick intelligence system for new products which are selling.

Still at It

Population and prosperity prophets are still at it. Harold G. Moulton in his provocative book, "Controlling Factors In Economic Development," published last year by the Brookings Institution, was one of the first to prophesy a long period of growing population, wealth and living standards in this country.

In a recent article in Foreign Affairs Magazine, Professor Joseph Davis, Director of the Food Research Institute of Leland Stanford University, predicts a growth in population of at least 50,000,000 people in the United States in the next 50 years. Professor Davis says that in the middle 50's the United States population will reach 152,000,000 people; in 1980 180,000,000 people and in the year 2000, 200,000,000 people.

Private Label Versus National Brand

There are reports that National Brands are surging ahead of the private label brands of retailers in self-service stores. Particularly in the food field, the private brands of some of the very large chains are in serious competition with many manufacturers of such products as coffees, canned vegetables, frozen fruit juices and other products.

Where the retailer was able to very largely direct and control personal selling in the store, some of these private labels had an advantage that provided very tough competition for national advertising.

Now on open display, side-by-side and with no influence from personal selling, the nationally advertised, consumer accepted product is beginning to forge ahead of the unadvertised brand of the retailer.

Pink Ice

A new product to enter the cosmetic trade with sweeping success is a new cream stated to be a five minute home facial and called "Pink Ice."

This new product is a creation of Helaine Saeger, who has incorporated and moved to a new factory in Hollywood, California. Joe Gardiner of J. Gardiner & Associates, Beverly Hills, California, a public relations expert specializing for many years in moving picture publicity, has taken over complete direction of sales and advertising.

"Pink Ice" is an interesting product at this time when the standard manufacturers of staple products are having so much trouble breaking down the barrier of rigid department store budgets. Within two days of hitting New York City, everywhere admitted the toughest cosmetic market in America, Joe Gardiner had substantial orders from five leading department stores with a promotion planned and scheduled to meet the products shipped from the Coast.

Progress?

Grocery wholesalers are meeting soon to vote on a trade practice code.

If adopted this would "prohibit selling in one part of the United States at prices lower than another" and "would prohibit selling at unreasonably low prices for the purpose of eliminating competition."

Reflex or Considered

For some time now Fuller & Smith & Ross, a well-known advertising agency, has been developing a conception of advertising and marketing based upon three basic kinds of buying. This has been used very largely as a guide in writing advertising copy, but now this conception is being translated into point-of-purchase display and marketing.

The three conceptions of advertising which this agency has defined are:

(1) The Reflex Purchase.

The reflex purchase includes low priced, casual, everyday necessities and utilities which are purchased as a habit or without particular thought. Commodities in this classification are, for instance, things like cigarettes, tooth paste, aspirin, etc.

(2) The Considered Purchase.

The considered purchase includes products which involve quite a bit of money for the particular person and are not casual purchases, but are usually bought only after investigation, comparison and satisfaction on the part of the buyer that he has procured the best product for his money.

(3) The Industrial Purchase.

The third division constitutes industrial products with the professional buyer where an entirely different approach must be made.

The basic division of consumer goods in the products which may be called the reflex purchase and the considered purchase clarifies the basic division that is now underway in the retail trade in the products that require selling and demonstration and products that will sell on open display without the service of the sales clerk. The division of consumer goods into these two classifications would substantially clarify the thinking of many manufacturers in planning their advertising and in every phase of their marketing program. As this agency points out, for the products of reflex purchase the retailer supplies rather than sells, the field is made up of competitive, fast moving products with big names and large consumer campaigns.

On the other hand, products of considered purchase are in substantial part at the mercy of the dealer or the distributor and merchandising becomes fully as important as consumer advertising.

a STOCK BOTTLE *with rare classic distinction*

C-39

If you have a product designed to grace Milady's dressing table, the charm and classic simplicity of "C-39" will add to its sales appeal and acceptance. And, in addition to the beauty and grace of design, you are assured the high standards of traditional SWINDELL quality.

C-39 is available from stock in the following sizes: ½ ounce, 1, 2, 4, 6, 8 and 16 ounce. May we send you a sample?

3 other popular STOCK BOTTLES

Beauty of design, durability, uniformity and dependability are characteristic of *all* SWINDELL bottles, of which these illustrated are typical. Available in sizes for ⅛ ounce to 16 ounces.

PRIVATE MOULD BOTTLES

Creative and imaginative designs for private mould bottles—hand made or machine made—are a SWINDELL specialty. Call on us for ideas.

When you think of bottles, think of

Swindell

SWINDELL BROTHERS, BALTIMORE, MD., 40 W. 40th ST., NEW YORK-18, N. Y. - ROBERTO ORTIZ, HAVANA, CUBA

Package Production

Preliminary data from the Department of Commerce on the container industry gives the following:

Glass container shipments for the year 1949 totaled 89,827,869 gross. This represents a decline of only 7.8 per cent from 1948 and is considerably less than was expected.

Metal can shipments rose during 1949 to 3,279,025 tons, the highest volume ever reached by the industry and 1 per cent above the 1948 peak.

Collapsible tubes shipped during 1949 totalled 5,379,466 gross, a slight increase over that shipped in 1948. Since 1946 the use of tin tubes for medicinal and pharmaceutical purposes has increased 55 per cent, with the use of aluminum tubes increasing 26 per cent. The use of tin-lead combinations for these same products has increased 55 per cent, and straight lead 50 per cent during the same period.

Item	*1948*	*1949*	*Percent Change*
Medicinals & Pharmaceuticals	884,910	852,417	–3.7
Cosmetics	580,870	423,950	–27.1
Shaving Preparations	565,750	625,260	+10.5
Dentifrices	2,520,588	2,647,078	+5.0

Folding paper boxes, the products of folding box boards, decreased 5.5 per cent in 1949 with the production of 2,062,345 tons. Set-up paper boxes output of 600,608 tons exceeded the 1948 total output by 0.7 per cent.

Molded rigid plastic container production fell very slightly in 1949, but there was a notable increase in demand for the so-called window packages and transparent wraps.

Display

In a recent lead story, Advertising Age reports on some research by the A. C. Neilson Co. with the statement that this company has issued "the strongest, positive statement on the value of point-of-purchase display yet made." This statement was that display increases sales 41 per cent, non-display decreases sales 24 per cent. In the research providing these figures it was found that the display stores definitely diverted business from the non-display stores.

In one particular case in which these figures came to light, the products surveyed were in a declining market and provided vivid evidence of the way in which display can resist such a decline at the expense of non-displayed products.

Department of Commerce Monthly Retail Trade Report

Retail sales of all kinds in drug and department stores showing sales for the month of February 1950 as compared with the same period in 1949.

	Department Stores	*Drug Stores*		*Department Stores*	*Drug Stores*
Atlanta	+5	–1	Minneapolis	+18	+6
Baltimore	–7	+1	Milwaukee	–6	+5
Birmingham	–6	+2	Newark	–6	–8
Boston	–2	–4	New York	–6	0
Chicago	–8	–4	Philadelphia	+12	+3
Cincinnati	–2	+2	Pittsburgh	–7	+2
Cleveland	–9	–5	Providence	–9	0
Dallas	X	+9	St. Louis	–4	–7
Detroit	–8	–6	San Francisco	–1	–8
Los Angeles	–5	–5	Seattle	+5	0

In another case for a product which had distribution in 90 per cent of all drug stores and was in a static market, in stores where no display was used the brand lost approximately 18 per cent in dollar sales in the average store, but in stores where a cabinet display was used, sales gained 17 per cent. In the case of this static market product there was a variation of 43 per cent in dollar sales per average store between the stores using no display and those using a cabinet display.

In the case of a product in a rapidly expanding market, the stores which used the display sales averaged $30.09 for a two-month period, whereas the non-display stores averaged $21.08. It was found in this case that the stores which used the display tended to be better than average outlets for this type of product and they had a better than average sale for the particular brands being studied.

Can't Have It Both Ways

The retail trend toward self-service should boost advertising, according to Mr. Cone, Chairman of the advertising agency. Foote, Cone & Belding and the new board head of the four "A's" who says "Without sales clerks to help how else can you promote your product?"

We think this is a very sound conclusion, Mr. Cone. It applies to those low priced, impulse buying, utility products that lend themselves to self-service or super-market retailing.

But what about that other class of product, the higher priced, shopping product where the consumer wants advice, information and instruction?

As retail clerks, in a fight for survival, become more efficient and better salesmen, should not this bring a decline in advertising for that kind of product? Should it not mean that manufacturers in this category will find it much more effective to spend a larger part of their appropriations for point-of-sale selling.

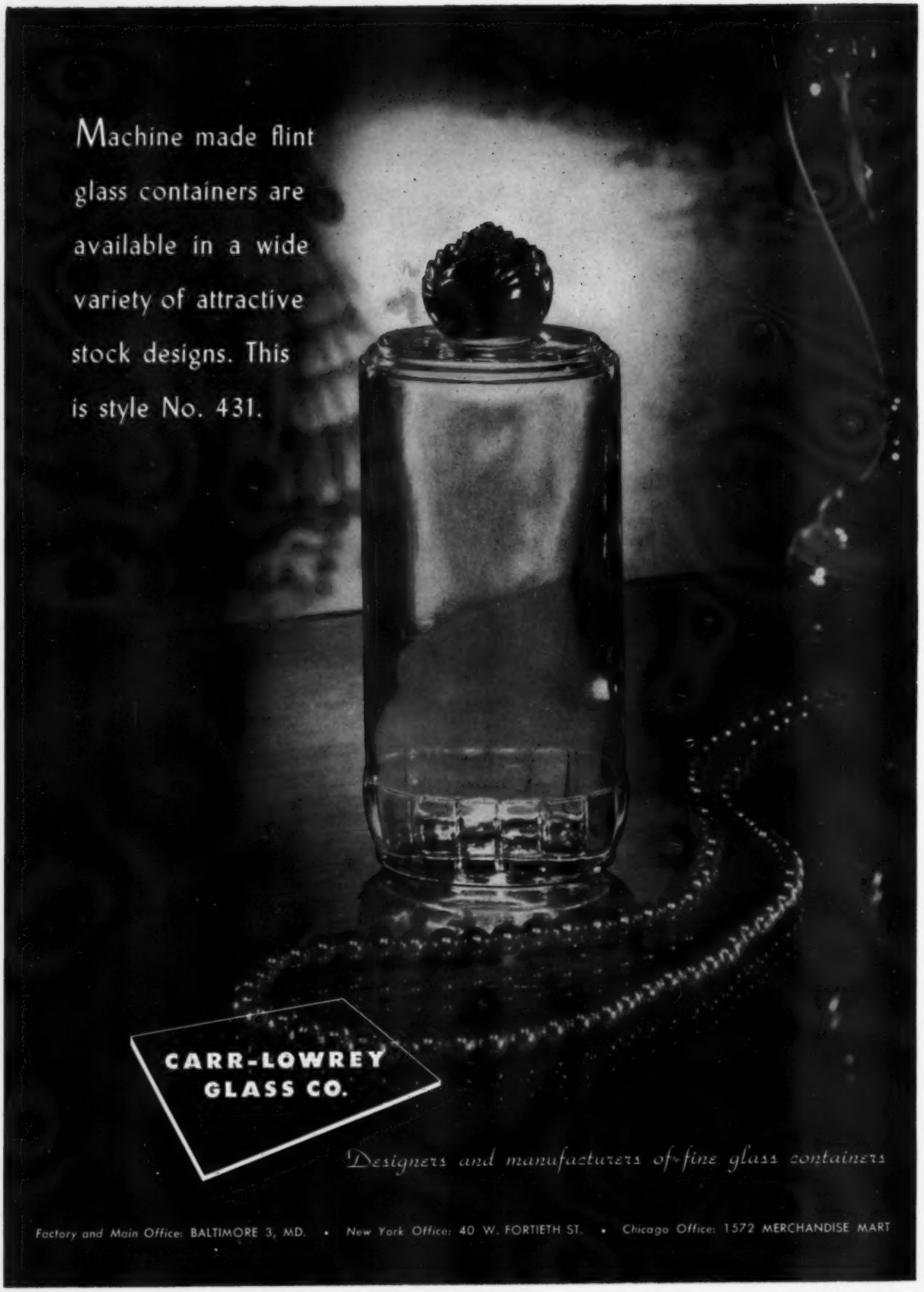
Caution

There is a word of caution to manufacturers who attempt to straddle an issue when they get involved in a Fair Trade mix-up as nasty as the one now taking place in electrical appliances between leading department stores and the discount houses.

Just where the caution comes in is contained in a bulletin from the American Fair Trade Company, Inc. "Courts have held that Fair Trade when not supported in good faith by the manufacturer, cannot be enforced."

Fair Trade Bureau To Continue

Drug and cosmetic manufacturers who have been supporting the nation-wide educational campaign to preserve the voluntary Fair Trade laws conducted by the Bureau of Education on Fair Trade, have voted to continue the program for a second year. The Bureau, which was established in July 1949 under the auspices of the National Association of Retail Druggists with representation from all parts of the drug industry, will operate on an unchanged budget of $120,000 to finance activities through June 31, 1951. The Bureau will compile and distribute 300 copies of a campaign manual to secretaries of state and local pharmaceutical associations throughout the country. A "how-to-do-it" guide, the manual will outline a series of tested public opinion techniques. A 300-page volume of research information, speeches, press releases and other material will also be furnished to help the druggists become effective spokesmen for Fair Trade, it is explained.


Machine made flint glass containers are available in a wide variety of attractive stock designs. This is style No. 431.
CARR-LOWREY GLASS CO.
Designers and manufacturers of fine glass containers
Factory and Main Office: BALTIMORE 3, MD. • New York Office: 40 W. FORTIETH ST. • Chicago Office: 1572 MERCHANDISE MART

NEW PRODUCTS AND NEW PACKAGES

The AMERICAN PHARMACEUTICAL COMPANY has introduced a new antihistamine tablet, Afko-Hist, for the relief of symptoms of colds and hay fever. They are available in retail drug stores without a prescription.

THE ANAHIST COMPANY, INC. announces that its Anahist tablets, used for the relief of colds, hay fever, and other allergies, are now available in an economy family size bottle containing 100 tablets. Anahist is also packaged in 15 and 40 tablet sizes.

BIO-RAMO DRUG CO., INC., is offering Amrulal Tablets, a product for use in the aging heart and fragile vessels. The tablets contain aminophyllin, rutin, and phenobarbital.

THE BORDEN COMPANY is offering Bremil, a new synthetic human milk for infant feeding, the ingredients being the same as those in human milk, and in amounts known to be essential for optimum growth and development. A clinical study showed that infants fed the synthetic milk are less likely to suffer gastrointestinal upsets than those fed on ordinary cow's milk or on other reconstructed milk formulas.

BRYAN LABORATORIES have introduced Balmzane, an antiseptic pain-relieving balm, said to be non-irritating, greaseless, and a stainless antiseptic for relief of muscular aches, neuralgia, rheumatic-arthritic pains, chest colds, sprains, congestion, and similar symptoms.

BURROUGHS WELLCOME & CO. has introduced "Empiral," a sedative and analgesic compressed product, containing phenobarbital, acetophenetidin, and acetylsalicylic acid. It is prescribed for the relief of pain which interferes with rest and sleep and for allaying anxiety generated by pain itself.

CALUMET MANUFACTURING CO. is offering a swivel-type, mechanical eyebrow pencil with a propel and repel crayon and a pointed tip in various shades, principally black, brown, tan, blue-green, and blue.

ENDO PRODUCTS INC. has introduced Hepcovite, a solution of vitamin B_{12} for intramuscular injection, to be used in pernicious anemia (uncomplicated or with neurologic complications), nutritional macrocytic anemia due to vitamin B_{12} deficiency, tropical and non-tropical sprue, and certain other cases of macrocytic anemia.

The HARROWER LABORATORY, INC. has made available Mucotin (Harrower) in a new sleeve-label prescription package, in both 50 and 100 tablet sizes. Cellophane-sealed in pairs, each tablet contains histamine-free gastric mucin, dried aluminum hydroxide gel, and magnesium trisilicate, and is for medical management of peptic ulcer and relief of gastric acidity.

LEDERLE LABORATORIES are offering Triple Sulfas Tablets (Lederle), containing sulfadiazine, sulfamethazine, and sulfamerazine and said to have the following advantages: high effectiveness, lower toxicity, and better excretion. Another product recently introduced is Newcastle Disease Vaccine—Intranasal, of special interest to poultrymen in that it protects baby chicks against Newcastle Disease.

Lederle is also making available Therapeutic Formula Vitamins *Lederle* for patients who require high-potency multivitamin therapy but for whom physicians feel the administration of folic acid unnecessary. Each vitamin capsule contains vitamin A, vitamin D, thiamine HCl, riboflavin, niacinamide, and ascorbic acid. Lederle is also offering Normocytin, a concentrate which contains both vitamins B_{12b} and B_{12} which are present in liver extract and are effective in pernicious anemia.

PRINCE MATCHABELLI, INC. is adding to its regular Potpourri Cologne a Potpourri Cologne Stick Concentree for the purse. Both the 4-ounce flask of cologne and the cologne stick sell for $1.00 each, plus tax, but a new special combination package may be purchased for $1.50, plus tax.

McKESSON & ROBBINS, INC., is introducing a 1-¾ oz. bottle of its Tartan Suntan Lotion, which can be carried in a handbag without bulk.

NORTHAM WARREN CORPORATION has added to its line of deodorants a large economy size Odorono Spray, selling at $1.00. The bottle is sky-blue opaque plastic with the name in white lettering.

THE NORWICH PHARMACAL COMPANY has introduced Norwich Poison Ivy Lotion, for quick relief of itching and pain from acute ivy, oak and sumac poisoning.

ORGANON INC. announces the availability of a high potency oral vitamin B_{12} preparation and a high strength vitamin B_{12} injectable preparation. The oral form, Dodex Forte (with oral activator), contains 5 micrograms of vitamin B_{12} per tablet activated for oral administration by 500 mg. of natural pyloric substance plus 1 mg. of folic acid. In the new Dodex Injectable, provided in multiple-dose vials, each cubic centimeter of the 5-cc. vials contains 30 micrograms of crystalline vitamin B_{12}.

Organon has also introduced Dodex Drops with Ferrous Gluconate, a special blood builder for children, which enables the physician to prescribe a correct combination of vitamin B_{12} and iron. The preparation is available in a combination package of two 15-cc vials. A few drops of each ingredient added to the infant's food each day are usually sufficient to control or treat the common childhood anemias due to deficiencies of these elements.

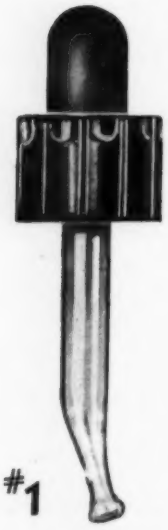
ORTHO PHARMACEUTICAL CORPORATION has developed Masse Nipple Cream, a preparation especially designed for the treatment and prevention of cracked and fissured nipples of pregnant and nursing women and for the massaging out of flat or inverted nipples. It is readily absorbed, non-staining, and antiseptic.

PARKE, DAVIS & COMPANY announces the availability of Cytobex (crystalline vitamin B_{12}, Parke-Davis), described as "the most effective antianemic substance known." It may be employed in place of liver extract in treatment of pernicious anemia, nutritional macrocytic anemia, tropical and non-tropical sprue, and megaloblastic anemia in infancy.

New Perfection DROPPING PARTS

#2

ACCURATELY CALIBRATED In Any Color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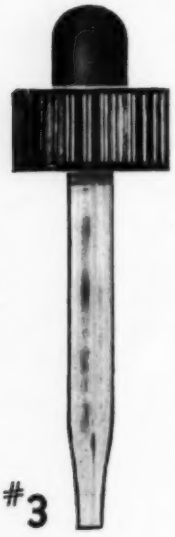
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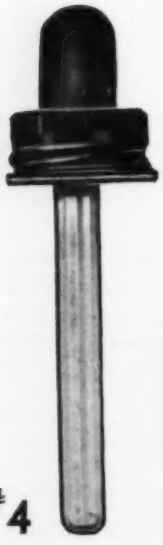

#4

This Inexpensive EXTRA FEATURE Adds A Welcome Convenience To The Use of Your Product

Accurate calibration of New Perfection dropper glasses adds immeasureably to the user's satisfaction with your product. Not only is the specified dose measured with more precision, but the tedious and time-wasting practice of counting drops is made unnecessary.

Trade-marks or firm names may also be imprinted on the glass, assuring that the name will be identified with the product each time it is used.

We can supply various colors of bulbs in natural rubber or in our special oil-resisting Amekine compound, caps of plastic or metal in many sizes and colors, and various types of dropper glasses in any length. New Perfection dropping parts will fit your own bottles, or can be supplied in combination with our Modernistic bottles in Amber, Blue, Green or Clear glass. Sizes: 2 cc, ⅛, ¼, ½, 1 and 2 oz.

Write for Samples and Quotations

PENNSYLVANIA GLASS PRODUCTS CO. INC.

"Glass Goods of the Better Kind"

430 N. CRAIG ST. • PITTSBURGH 13, PA., U. S. A.

Additional new products introduced by Parke, Davis & Co. include: Caladryl, an effective lotion used in combatting various types of itching and burning sensations, which contains 1 per cent of benadryl hydrochloride in a calamine-lotion type vehicle, with camphor and glycerine, and liquid Taka-Combex, a convenient means for treating those patients having faulty B complex intake, particularly when associated with digestive disturbances.

JEAN PATOU'S Poudre Moment Supreme face powder, absent since the war, is again available in the United States. The same sequence of five blended shades is offered—Rachel Dore, Rose Adonis, Bois de Rose, Andalou, and Ocre Fonce.

PITMAN-MOORE COMPANY is introducing Infagen, a concentrated triple antigen for simultaneous immunization against diphtheria, tetanus and pertussis.

REVLON PRODUCTS CORP. is releasing Aquamarine Cream Deodorant and Aquamarine Spray Deodorant, antiperspirants, one in solid cream form, and the other in a liquid cream in a squeeze-type bottle. Both items are scented with the perfumes used in in Revlon's soap and lotion.

HELENA RUBINSTEIN has introduced a new "Beautiful Eyes" kit containing two shades of Luminous Eye Shadow, a tube of Waterproof Mascara, a jar of Eye Cream Special, and a new Eye Pencil. Packaged in a lucite-like case, the kit is priced at $2.50 plus tax.

Another new preparation is Helena Rubinstein's Sun and Windproof Lotion, a smooth, white vanishing lotion packaged in an unbreakable plastic bottle with spray-on top.

PEGGY SAGE has designed two new packages for late spring and summer, each featuring Peggy Sage manicure polish and harmonizing Shimmer Lipstick in five shades, from delicate pink through blazing reds.

SCHIAPARELLI has released a new handy sized bottle of Shocking Body Radiance, which is half the size of the original bottle.

SHARP & DOHME announces the release of several products . . . "Penaire" Penicillin Inhalator, provided with penicillin capsules containing 100,000 units of finely divided crystalline sodium penicillin G powder which is stable in the dry form for a prolonged period, and "Sharmone" Pregnenolone Acetate Tablets, moderately effective in relieving symptoms in a substantial portion of patients suffering from rheumatoid arthritis, without causing any adverse side reactions, according to clinical studies.

Additional products are Acid-V Capsules, useful for replacement therapy in patients with gastric acidity. Each capsule contains glutamic acid hydrochloride, thiamine hydrochloride, riboflavin, and niacinamide and serves as a vitamin supplement for the diet of adult patients suffering from hypochlorhydria and achlorhydria—the lack of hydrochloric acid in the gastric juice—which occurs in an estimated 10 per cent of all individuals.

"Tracinets" Vacitracin - Tyrothricin Troches, new double-acting throat lozenges for the treatment of mouth and throat infections.

SMITH, KLINE & FRENCH LABORATORIES have developed Feojectin, a stable saccharated oxide of iron for intravenous injection. It is intended for use in those cases of iron-deficiency anemia in which oral medication is relatively ineffective, not well tolerated, or in which oral medication produces results too slowly.

STANLEY DRUG PRODUCTS announces the introduction of Rubicaps, a complete high potency vitamin B Complex capsule fortified with folic acid and vitamin B_{12}, which is for the first time available without prescription. Trial size 30-capsule bottle retails for $3.50, large 100-capsule bottle for $10.

TUSSY COSMETIQUES announces the addition of the Midnight Lipstick Combination to its new Midnight series. The combination is packaged in a sapphire blue cylinder with a Tussy lipstick at one end and a vial of Midnight perfume in the other.

VANPELT & BROWN, INC. has made available Silaloid Tablets which provide three-way treatment for gastric hyperacidity. The tablets contain hyoscyamine sulfate, atropine sulfate and small, divided doses of phenobarbital. For effective, controlled antacid action, magnesium trisilicate has the additional advantage of longer action without constipation.

Another new development is Homadonna, a potent sedative-antispasmodic. According to the manufacturers, this product not only provides an antispasmodic action as well as the sedation due to phenobarbital, but also gives the required effects with a minimum of side reactions.

WYETH INCORPORATED has added to the hormone line Estradiol Membrettes, for transmucosal absorption, supplied in bottles of 100.

You Think It's Easy!

(*Continued from page 519*)

and show us whether the antibiotic from Mold X can be produced commercially. They also provide material for microbiological, chemical and pharmacological tests.

Now we must learn whether the new antibiotic is as effective in the presence of blood serum as it is in broth or on agar. As the great need for antibiotics is in fields where the active compound must be transported by blood or other body fluids, inactivation by serum is a virtual death knell for an otherwise likely-looking drug.

Another easy hurdle is the acute toxicity test. This is a barrier which most of the new antibiotics fail to surmount, for they are too toxic for use in human beings. Some could even be made into rat poisons.

Even if our new antibiotic passes the acute toxicity test, a great deal of work remains to be done. The microbiologists have to develop a dependable bioassay, study cultural conditions to increase the yield, and tease out higher producing strains. The biochemists must work out economical recovery methods, and, if possible, isolate and purify the antibotic.

Once the cultural and recovery processes are worked out in the laboratory, the pilot plant takes over and carries the program to the semi-commercial stage. At the same time it keeps feeding material to research for still more tests.

Acute toxicity has already been determined, but chronic toxicity remains to be ascertained. This is particularly important in the case of tuberculosis, which involves medication over long periods of time.

(*Continued on page 574*)

Wanted:

I want a job selling perfumes and cosmetics.

I know the cities and towns where these products are sold in worthwhile volume, where all the capable, energetic retail sellers of cosmetics are located, and where the sales expense of calling will return a profit.

When I enter the store of any of these retailers, I am sure of a welcome based on long, friendly associations. I know the folks who do the buying; more important I know the folks who do the selling. I know how to get the attention of these folks, how to get my story over without stepping on anyone's toes.

I want to do more than just send you an order which would only mean that your goods are at rest in that store. I like to sell and my idea of selling is to keep your goods moving through the store to Miss and Mrs. Public.

I would expect you to give me a clear, concise story of your product—its quality, competitive advantages and selling points. I would need to know your advertising program, so that I can build up in the mind of these retail folks the expectation of substantial consumer interest. I want also to know about your company policies so that I can win friendly admiration for your products and your company.

I can sell perfumes and cosmetics because I know the people who in turn sell them to the public.

Let me carry the kind of message which encourages retail display for your product and friendly, informed selling behind the counter and you will soon see results in increased retail orders.

I have been selling perfumes and cosmetics for over 33 years. Any good retailer will give you a reference.

My name is BEAUTY FASHION:

Do you need a top-notch, tested, retail salesman?

You can believe this fortune teller!

Want to peek at future sales and profits? Then forget the crystal ball and gaze at Meritseal . . . for here's a cap with a reputation for making dreams come true. Scores of well known manufacturers have standardized on Meritseal for their entire lines and are delighted with the results.

It's easy to understand why, because Meritseal is everything a good closure should be. It has beauty to spare and sealing efficiency you can depend on. Its trouble-free application is a joy to every production man, and as to price . . . well, you'll find that this outstanding closure fits thriftly into the packaging budget of almost any product.

You'll never fully realize how much Meritseal has to offer until you see it, examine it and try it on your product. So write us today. We'll send samples, in the sizes you want, and full information.

Merit SEAL —

CROWN CORK SPECIALTY CORP.
Division of
Crown Cork & Seal Company

MAIN OFFICE: ST. LOUIS, MO. • NEW YORK: 60 EAST FORTY-SECOND STREET • CHICAGO: 401-09 WEST ONTARIO STREET

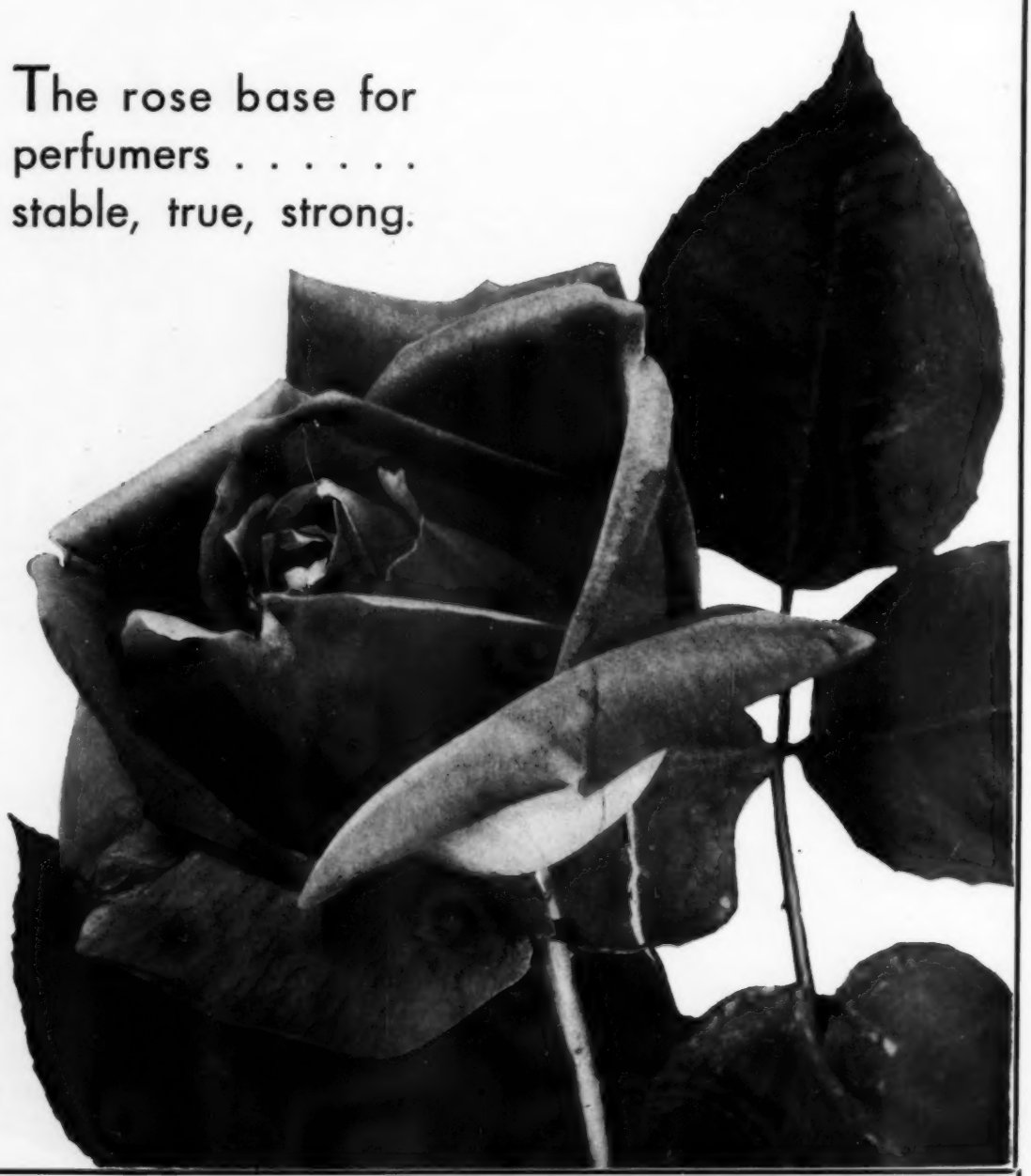
WESTERN REPRESENTATIVE: WESTERN CROWN CORK & SEAL CORPORATION . . . SAN FRANCISCO . . . LOS ANGELES

Osmodor

Coeur de Rose

4146

The rose base for
perfumers . . . . . .
stable, true, strong.



SCHIMMEL & CO., Inc., 601 West 26th Street, New York 1. N. Y.

NEWS...

Lipscomb Pres. Pepsodent Div.

Charles T. Lipscomb, Jr. was named president of the Pepsodent division of Lever Brothers Company last month. He had formerly been associated with McKesson & Robbins, Inc. since 1942, most recently as vice-president and general sales manager. He has been succeeded there by Herman C. Nolen, vice-president in charge of drug merchandising, who has taken over the supervision of drug sales.

CHARLES T. LIPSCOMB, JR.

Mr. Lipscomb began his business career with the Vick Chemical Company as sales manager, following which he was associated with the Coca-Cola Co. from 1939 to 1942.

Dr. Volwiler Heads Abbott

Dr. Ernest H. Volwiler, executive vice-president for four years, and director of research for thirteen years, was elected president and general manager of Abbott Laboratories at the annual board of directors meeting early in April. Dr. Volwiler succeeded Raymond E. Horn, who was named president emeritus, having been relieved of the office at his own request. George R. Cain was elected executive vice-president, replacing Dr. Volwiler in that position.

Two new directors, Dr. George R. Hazel, clinical research director, and Norman A. Hansen, director of the development laboratories, were elected by the stockholders to fill the directorships left open by the retirement of Edward H. Ravenscroft, chairman emeritus, and Dr. Joseph F. Biehn, medical director, respectively.

Additional directors who were re-elected include Alfred W. Bays, Edgar B. Carter, S. DeWitt Clough, Charles S. Downs, Edmund L. Drach, Edward A. Ravenscroft, Hugh D. Robinson, James F. Stiles, Jr., Floyd K. Thayer, Claude A. Thornburg, Elmer B. Vliet and Ferdinand H. Young. Those officers re-elected were Mr. Clough, chairman of the board; Mr. Stiles, vice-president and treasurer; Mr. Young, vice-president in charge of production; Mr. Bays, secretary and general counsel; Mr. Downs, vice-president in charge of advertising; Mr. Drach, vice-president in charge of purchases; Mr. Carter, assistant secretary and executive director of research; Mr. Thornburg, assistant treasurer and director of auditing; and George Manz, assistant treasurer.

DR. ERNEST H. VOLWILER

GEORGE R. CAIN

Awarded Remington Medal

Dr. Edwin Leigh Newcomb, secretary and managing director of the American Foundation for Pharmaceutical Education and executive vice-president of the National Wholesale Druggists Association, will receive the Remington Medal, according to the American Pharmaceutical Association. The medal, which is presented by the New York Branch of the association, to that individual who has done most for American pharmacy in the previous year, or over a period of years, will be awarded at a dinner in New York, probably early in December.

Starting as a teacher of botany and pharmacognosy at the Philadelphia College of Pharmacy and Science in 1904, Dr. Newcomb became a professor in the College of Pharmacy of the University of Minnesota, where he established a medicinal plant garden, and during World War I was instrumental in the cultivation and standardization of digitalis. Through the School of Business, University of Minnesota, Dr. Newcomb directed research on northwestern retail drug-store operating costs from 1920 to 1925. He was editor and officer of the Bruce Publishing Company from 1916 through 1926, which included, among other professional and trade journals, "Northwestern Druggist," "Minnesota Medicine," and "The American Radiological Journal."

EDWIN LEIGH NEWCOMB

Dr. Newcomb has been a member of the U.S.P. Revision Committee from 1920 to the present time; he was chairman of the sub-committee on botany and pharmacognosy from 1930 to 1940; and he is a life member in the American Pharmaceutical Association, American Botanical Society, American Association for the Advancement of Science, Fairchild Tropical Garden, American Rose Society, and of various state pharmaceutical associations. He was the secretary of the NWDA from 1927 through

1933, secretary and executive vice-president from 1933 to 1943, and executive vice-president to the present time. Dr. Newcomb is a member of the executive committee of the Health Information Foundation, among other organizations.

He has authored many papers relating to medicinal plant cultivation, pharmacognosy, research and text for U.S.P. and N.F. vegetable drug monographs, and also numerous papers relating to fair, lawful and economically sound distribution in the drug industry.

In summarizing his activity, the committee on the award of the Remington Medal stated, "No one in the field of pharmacy has worked more industriously, productively, and continuously for its advancement."

Shamel Chem. & Drug President

Ray Shamel, district manager of Mallinckrodt Chemical Co., was elected president of the Cleveland Drug and Chemical Club during the regular meeting at Carter Hotel in March. Additional officers installed for the 1950-51 season were Robert W. Gould, vice-president of Bonne Bell, Inc., as vice-president; Tom Chadwick, district manager, Chas. Pfizer & Co., secretary; and William Gussman, president, Bio-Chemical Co., treasurer.

RAY SHAMEL

Fragrance Foundation Meeting

The annual meeting of the Fragrance Foundation, Inc. will be held at 10 a.m. on Thursday, May 18, in the Basildon Room of the Waldorf Astoria Hotel, New York, according to J. S. Wiedhopf, president. The tentative program of the meeting is the report of the treasurer by Samuel Rubin; report of the president by Mr. Weidhopf; report of the coordinator by Miriam French; and the election and installation of officers.

Frederick W. Bristol, sales promotion manager of Bristol-Myers Company, receiving from Preston J. Beil, editor of Variety Merchandiser, the publication's 1949 award for distinguished achievement in the packaging of Bristol-Myers' Mum deodorant.

Completes 50 Years as President

Sidney Hollander was elected chairman of the board of the Maryland Pharmaceutical Co., after having served as president of the company and its predecessor for the past 50 years. It was also announced that J. Stanley Probst, formerly vice-president, was elected president of the company, and that Walter Hollander, vice-president and treasurer in charge of advertising, will continue to direct the advertising.

J. STANELY PROBST

Opens Consulting Laboratory

Norman Applezweig, formerly general manager and technical director of Hygrade Laboratories Inc., has announced the opening of a consulting laboratory at 31 South Street in New York. The laboratory will carry on research relating to the development of new biochemical products and processes.

Nopco Forms Pacific Division

Nopco Chemical Company has just formed its new Pacific division, according to Thomas A. Printon, president. The western division will include sales, and all other company activities for the eleven westernmost states of California, Washington, Oregon, Idaho, Montana, Arizona, Nevada, Utah, Colorado, Wyoming and New Mexico, as well as the province of British Columbia.

Perc S. Brown, a company vice-president, will head the Pacific division and will be assisted by Harold A. Swanson as general sales manager. Arthur V. Swarthout, formerly of the fiscal department, will take charge of market survey work. Mr. Swarthout plans to leave for the west coast about June 1, while Mr. Brown and Mr. Swanson will not take up residence there until later in the year. Mr. Swarthout will be succeeded in the fiscal department at the home office by Robert M. Urich, and Mr. Swanson, in the legal department, by J. James Denzler.

Andreasen Named Manager

Svend I. Andreasen, assistant manager of the Sharp & Dohme Inter-American Corporation, Argentine Branch, has been appointed Argentine branch manager, according to W. B. Wimpenney, president. Mr. Andreasen succeeds Harold D. Archer, who succumbed to a heart attack in February, while visiting his family in Brockton, Mass.

Appointed Harrower Chicago Mgr.

L. Allen Keller was appointed sales manager of the Chicago division of the Harrower Laboratory, Inc., according to R. K. Hetterick, vice-president and director of sales. He joined Harrower in 1946 as field manager of the southern

L. ALLEN KELLER

district with headquarters in Memphis, which position he held until his recent promotion and transfer to Chicago.

Myers Leaves Penick & Co.

Charles A. Myers, former president of Dodge & Olcott, Inc., and more recently vice-president of S. B. Penick & Co. announced the termination of his connection with the latter concern May first. He will make his future plans known in the near future.

U.S.P. Headquarters Dedicated

Dedication of the new U. S. Pharmacopoeia Headquarters Building at 46 Park Ave., New York, took place on April 12. The dedication was held at the nearby Pierpont Morgan Library, at 36th St. and Madison Ave. Dr. Robert L. Swain, chairman of the U.S.P. Board of Trustees, presided at the dedication program; F. Epping Reinartz, D.D., general secretary of the United Lutheran Church in America, delivered the invocation; and addresses were delivered by the following; U. S. Commissioner of Foods and Drugs Paul B. Dunbar spoke on the Evolution of the Pharmacopoeia as a Legal Standard; Chief of the Laboratory of Biologics Control, National Institutes of Health Dr. William G. Workman spoke on the Standardization of Biological Products; Chairman, U.S.P. Committee of Revision Dr. E. Fullerton Cook spoke on Pharmacopoeial Wanderings and Homecoming; and U. S. Pharmacopoeial Convention President Dr. Cary Eggleston spoke on Medicine's Stake in the Pharmacopoeia.

Appointed to Harrower Advg. Staff

Beatrice Sprinkel has been added to the executive staff of the Harrower Laboratory, Inc., in Jersey City as assistant advertising manager. Before moving to New York, Miss Sprinkel was assistant manager of advertising

BEATRICE SPRINKEL

and public relations for Cutter Laboratories, Berkeley, Calif.

Will Visit United States

Sir Robert Menzies, Kt., O.B.E., C.A., chairman of the board of Smith, Stanistreet & Co., Ltd., India, and H. N. Nicholls, director, are planning to visit the United States in July, at which time they would like to meet leading chemical, pharmaceutical and cosmetic organizations with a view to manufacturing their products on their behalf in India. This company has been established in India since 1821 and is a subsidiary of the British India Corporation Ltd., of which Sir Robert Menzies is the chairman and managing director.

Alsop Celebrates 30th Year

The Alsop Engineering Corporation held a banquet for all its employees and guests last month in observance of the 30th anniversary of the firm's founding. Awards were presented to Charles Edward Crowley, president, and Walter William Freystedt, second vice-president, for 25 years of service to the company. George William Johnson; Elias Zachary Ross, secretary and treasurer; James Joseph O'Shea, third vice-president; and Otto Edward Pfannkuch were honored for 15 years of service. Twenty-seven additional awards were presented to those who had completed ten years of service.

Formed in 1920 as a one-man institution with walk-up quarters on Water Street in downtown New York, the Alsop Engineering Corporation moved to several different locations in New York during its first fourteen years of existence, and feeling the need for space, finally purchased the present building in Milldale, Connecticut early in 1936. Today the company does all its own manufacturing and maintains offices or distributors in every major city in the United States as well as in South America and Europe.

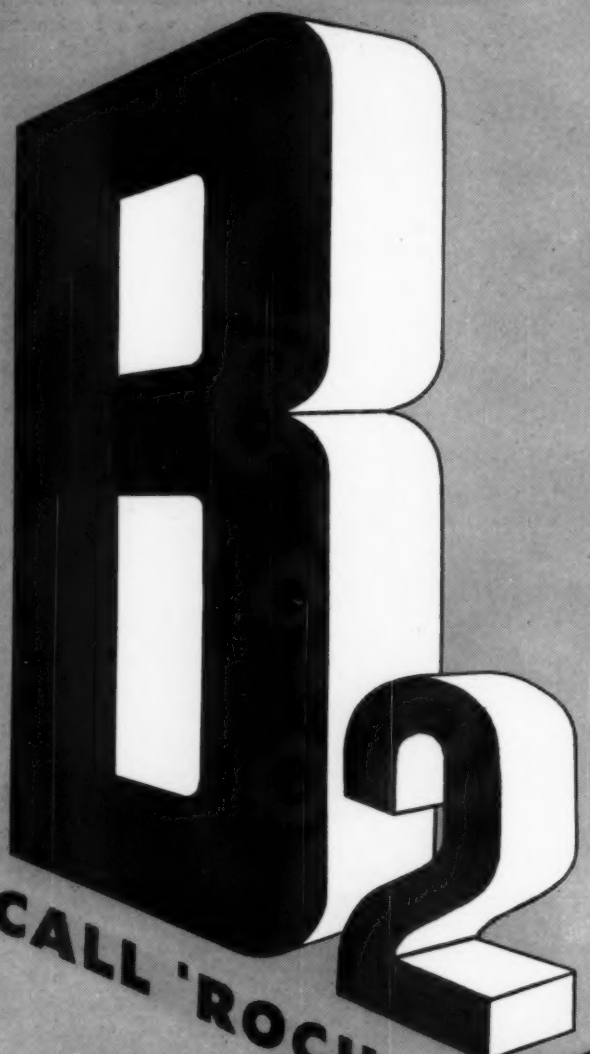
Offers Glucuronidase Preparation

The VioBin Corporation of Monticello, Illinois, now have available a beta glucuronidase preparation which is being used by a number of laboratories for splitting glucuronides, and other studies. This is being sold in a dry form in which ammonium sulphate is diluent and is standardized at 25,000 Fishman Units per gram.

At the dedication of the Pharmacopoeia Building, 46 Park Ave., New York, are, left to right, Dr. Paul B. Dunbar, U. S. Commissioner of Foods and Drugs; Dr. Cary Eggleston, president, U. S. Pharmacopoeial Convention; Dr. E. Fullerton Cook, chairman, U.S.P. committee of revision; Dr. William G. Workman, chief, laboratory of biologics control, National Institutes of Health, Bethesda, Maryland, all of whom delivered addresses; and and Dr. Robert L. Swain, chairman, U.S.P. Board of Trustees, who presided.

RIBOFLAVIN, U. S. P.

Now in two types — Regular and Solutions Type.
Manufactured by the ton — to meet exacting requirements.
Place your riboflavin orders at 'Roche' Park.
Careful, courteous service extended — always.



Make Roche headquarters for:
Ascorbic Acid — Riboflavin
Thiamine — Pyridoxine
Panthenol — Biotin
dl-alpha-Tocopherol unesterified
dl-alpha-Tocopherol Acetate
Calcium Pantothenate dextro
Niacin — Niacinamide
Vitamin A Acetate synthetic
Vitamin A Palmitate synthetic

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HOFFMANN-LA ROCHE INC. — NUTLEY 10, NEW JERSEY

Pacific Coast: L. H. Butcher Company • Los Angeles, San Francisco, Seattle
In Canada: Hoffmann-La Roche, Ltd., Montreal, Que.

Aureomycin in Smithsonian Inst.

An illuminated exhibit of aureomycin was dedicated recently at the Smithsonian Institution, Washington, D. C. and presented to Dr. George S. Thomas, associate curator, division of Medicine and Public Health of the Smithsonian by Fred L. Murphy, manager of government sales of Lederle Laboratories division, American Cyanamid Company. The exhibit depicts the transformation of molds from soil into medicines which combat serious human diseases. In the foreground of the display is a global map and a group of test tubes of soil, collected from all parts of the world, which were examined before the mold yielding aureomycin was found. The list of diseases attacked by aureomycin is worked into the background.

Fred L. Murphy, left, manager of government sales and manager of exhibits for Lederle Laboratories division, American Cyanamid Company, and Dr. George S. Thomas, associate curator, division of medicine and public health of the Smithsonian Institution, observing the new aureomycin exhibit following its dedication in the museum at Washington, D. C.

Abbott Appointments

David D. Stiles, associate director of sales, Abbott Laboratories, has been appointed director of market development, while Herbert S. Wilkinson, general sales manager, has been appointed director of sales, according to Dr. Ernest H. Volwiler, president and general manager. Mr. Stiles will continue as chairman of the sales executive committee and editor of the Abbott sales bulletin.

DAVID D. STILES

HERBERT S. WILKINSON

Takes Over Allaire, Woodward

I. P. Callison & Sons Seattle, Wash., has taken over the management and operations of Allaire, Woodward & Co., Peoria, Ill., which will nevertheless continue to specialize in fluid, powdered and solid extracts, syrups, whole powdered and ground drugs, concentrates, resins and tinctures, under the Allaire, Woodward & Co. name. The facilities of the Callison research laboratories and certain new processes and equipment have been made available to the Peoria organization, and plans are being formulated for the enlargement and improvement of the Allaire, Woodward & Co. laboratories and plant.

Elected Pres. of Kohnstamm

Louis J. Woolf was elected president and treasurer of H. Kohnstamm & Co., Inc. by the board of directors. Formerly executive vice-president, Mr. Woolf succeeds the late Lothair S. Kohnstamm who died in January. Also elected by the board were directors Charles D. Allen, vice-president in charge of the Brooklyn plant; Richard S. Carmel, vice-president in charge of the chemical division; Robert A. Phair, secretary; and Edwin W. Mayer, assistant secretary, who was simultaneously named to the board.

"What's New" Wins Award

Two club medals have been awarded to "What's New," Abbott Laboratories external house organ, one to Bert Ray, art director, for the Christmas, 1949, issue, and the other to Doris Lee for her painting "Summer Idyll" on the cover of the July-August, 1949, issue.

Present Portrait of Fleming

A portrait of Sir Alexander Fleming, painted by Bernard Goodwin and showing Sir Alexander in white smock at his work table in St. Mary's Hospital, London, was presented last month to the New York Academy of Medicine as the personal gift of James J. Kerrigan, vice-president of Merck & Co., and John L. Smith, chairman of the board of Chas. Pfizer & Co. The presentation was made just two days before Sir Alexander sailed back to England and he was on hand for the presentation. Said he:

"It's nice to see myself up there, but it's embarrassing. There was a time when I led a peaceful life, but that, (pointing to the mold) brought me all sorts of trouble. It's taken me all over the world, and now it's brought me to the Academy of Medicine to see my own picture."

Advanced by Calif. Exchange

The promotions of L. Cletus Gallagher, C. E. Scovern, Jr., and J. P. Haman, were announced by M. L. Chapman, manager of the California Fruit Growers Exchange, products department. Mr. Gallagher, New England district manager, was promoted to sales manager, industrial division, with headquarters at the home office in Ontario, California; Mr. Scovern, assistant central division manager, was promoted to southwestern division manager with headquarters in Dallas; and Mr. Haman was promoted from New York district manager to assistant eastern division manager with headquarters in New York City.

Honorary Membership to Sinclair

On May 25, the American Society of Perfumers will confer on Frazer V. Sinclair, publisher of DRUG & COSMETIC INDUSTRY, its first honorary membership. The announcement states that this honor is being bestowed on Mr. Sinclair "not only because of his sympathetic interest in the aims and ideals of the Society, but also because of his distinctive service to the perfume and cosmetic industry."

The presentation takes place at the regular dinner meeting of the Society at Hotel Warwick, New York. The meeting is open to all who care to attend. Reservations at $6.00 must reach the treasurer, R. B. Houk, Dodge & Olcott, Inc., New York, not later than May 23.

Hawley Joins White Laboratories

John H. Hawley has joined White Laboratories in an executive position

JOHN H. HAWLEY

in the field of marketing. For the past eight years Mr. Hawley has been director of marketing research for Ciba Pharmaceutical Products. He instituted this department at Ciba and originated the Ciba drug panel.

Cassullo Named Fritzsche Treasurer

John L. Cassullo has been elected treasurer of Fritzsche Brothers, relieving First Vice-president John H. Montgomery of this additional responsibility which he assumed on the death of former treasurer W. A. R. Welcke in 1945. Mr. Montgomery will devote his energies to administrative and sales work and a general supervision of the business under the guidance of Fritzsche President F. H. Leonhardt.

Bendetson Adv. Mgr. Endo Prods.

Stanley J. Bendetson has been appointed advertising manager of Endo Products Inc., having formerly been advertising manager of Schieffelin & Co.

Givaudan Sales Meeting

Members of the sales staff and other divisions of Givaudan-Delawanna attended the annual sales meeting at the Berkeley-Carteret at Asbury Park, New Jersey, from April 22 to 25. The meeting opened by Ernest R. Durrer, executive vice-president, was presided over by J. H. R. Stephenson, eastern sales manager. Among those present were representatives from the New York, New England, Detroit, Cincinnati, Chicago, and Los Angeles offices, and from the affiliated companies, Sindar Corp. and Givaudan Flavors Inc.

Garbat with Sandoz Pharmaceuticals

Julian Garbat, formerly a medical writer with Commercial Solvents Corp., has joined the advertising department of Sandoz Pharmaceuticals, where he will conduct library research and write professional medical literature. He had also previously been a pilot plant engineer with the Heyden Chemical Company in Streptomycin development.

Adler Heads Chemo Puro

Dr. Martin Adler has been elected president, and P. C. Hereld, executive vice-president, of Chemo Puro Manufacturing Corporation. Dr. Adler, formerly vice-president, succeeds the late Dr. Hugo Bamberger. Mr. Hereld has been director of sales and development since 1941.

Research Society Established

The Research Society, Inc. has been formed to provide drug manufacturers with a practical and economical market research service, according to William T. Doyle, president, who reports that his organization has set up a national network of pharmaceutically trained personnel to gather market information. Headquarters of the society are located at 51 East 51st Street, New York.

Gaylor, Cifelli & Jurick

Thomas Cifelli, Jr., who writes Patent Thoughts and Trends each month in this publication, announces that Peter J. Gaylor, Mr. Cifelli, and Rudolph J. Jurick have become associated under the firm name of Gaylor, Cifelli & Jurick for the continued practice of patent, trade-mark and copyright law exclusively. Offices of the firm are in the National Newark Building, 744 Broad St., Newark 2, N. J. Telephone is Market 3-3103.

Lightfoot With Syntex

C. L. Lightfoot Jr. is now with Syntex, S. A., Mexico City, in charge of hormone production.

Dr. Closs—A.P.M.A. Executive Secretary

Dr. John O'Neill Closs for fifteen years chief chemist and vice-president of the Tilden Company, New Lebanon, N. Y., has been appointed to the newly created position of Executive Secretary of the American Pharmaceutical Manufacturers Association, it is announced by Dr. Theodore G. Klumpp, president of the Association and of Winthrop-Stearns. Dr. Closs will continue to reside in New Lebanon for the present, but plans provide for the establishment in New York of a headquarters office for the Association.

DR. J. O'NEILL CLOSS

For some years Dr. Closs has been a director of the Association and honorary secretary. While he has resigned from the Tilden Company, he will continue as a director of that firm. He is a native of Missouri, receiving his education at Washington University in St. Louis, the University of Wisconsin, and the University of Berlin, Germany.

Parke, Davis Buys Plant Site

Parke, Davis & Co. has bought a thirty-acre site near Holland, Mich., for manufacturing laboratories, announces Dr. A. W. Lescohier, president. The property is on Lake Macatawa adjacent to a deep-water channel connecting with Lake Michigan. Deep-water wells on the property provide fresh, cool water for manufacturing purposes.

Formerly owned by Amour & Co., the property will be modernized and equipped at a cost of $1,500,000 to augment the company's facilities for manufacture of synthetic drugs and chemicals. The plant will be in operation in six to eight months.

Advanced by Winthrop-Stearns

F. O. S. Spencer, formerly special hospital representative in Detroit, has been named manager of the retail sales division of Winthrop-Stearns, Inc., according to Joseph G. Noh, vice-president in charge of sales.

Woods Head of Comm. Solvents

J. Albert Woods was elected president of Commercial Solvents Corporation at a special meeting of the board of directors, according to Major Theodore F. Walker, chairman of the board.

J. ALBERT WOODS

HOWARD L. SANDERS

At a subsequent meeting Howard L. Sanders, treasurer, was appointed vice-president and treasurer of Commercial Solvents.

Ivers-Lee Addition

Ivers-Lee Company has added a new plant to their Sanitape-Sealtite Contract Packaging facilities. Located near their present No. 1 plant, the addition is a single-story building providing straight-line, fully mechanized production from receiving platform to shipping department. Motor skid carriers will be employed for material handling, while new motor-driven conveyors and new high-speed, unit-packaging machines will afford maximum efficiency and economy. In addition, new carton-making and over-wrap machines are being installed so every packaging operation will be handled under one roof. This new plant is designed for longer runs of pills, tablets and triturates.

McRay's Company Purchased

McRay's Company, Des Moines, Iowa, toiletries, and cosmetic manufacturer, has been purchased by L. R. Sandahl, vice-president of the former F. W. Fitch Company for 25 years. The purchase, according to Dr. John B. Shumaker, stockholder and formerly president of McRay's Company, included the McRay's trade-mark, the right to manufacture and sell its products, and its assets and good-will. McRay's Company will continue as a corporation, and its manufacturing facilities will remain at Madrid, Iowa, while the new Des Moines office will be located at 306 15th Street, site of the Fitch Building. Additional stockholders are Rachel Davitt, products demonstrator and Ralph McCall, former F. W. Fitch Co. assistant chemist for over 20 years.

The McRay firm was originally established in 1937 by Max Rauer, who died in February of this year. Following reorganization, according to Mr. Sandahl, the present field staff is made up of former Fitch sales representatives, including E. E. Bengston, Trave Cohoon, Sidney Crimond, J. E. Gillespie, Alf Haynes, Al Mason, Francis Powers, Robert Smith, and L. S. Stults.

Professional Drugs, Inc. Bought

Professional Drugs, Inc., New York, was acquired by the Lemmon Pharmacal Company of Sellersville, Pa., the early part of last month, according to John L. Lemmon, president. All products of Professional Drugs, Inc. will continue to be marketed under that name, ininclding the principal product, "Novalene," but control of both companies will be in Mr. Lemmon's hands. The Lemmon Pharmacal Company will continue to operate as in the past and executive offices of both companies will be located at Sellersville.

Lee Pharm. Sells Subsidiary

Lee Pharmacal Company has sold its subsidiary hair products company, Spray-A-Wave, to Consolidated Royal Chemical Company of Chicago, according to Raymond Lee, chairman of the board, and John Roosevelt, president. The names of Spray-A-Wave hair set lotion and Spray-A-Wave Shampoo, and all inventories, are now the property of the Chicago company, of which James Hershfield is president. This sale was consummated in order to allow Lee Pharmacal to concentrate its activities in the home wave field, with the recently formed associate company of Ogilvie Sisters-Lee, Inc.

Winthrop-Stearns Lists Chemicals

A total of 91 chemicals, including 22 amino acids, are listed by the special chemicals division of Winthrop-Stearns Inc., in its first descriptive price list since 1946. An accompanying note states the Sterling-Winthrop Research Institute produces several hundred new organic chemicals each year, although it is impractical to list all of them in the catalogue. Among the newer chemicals are diphenylacetonitrile, methadone, malonoitrile, mersalyl acid, U.S.P., and mercury-salicylallylamide-O-acetic acid.

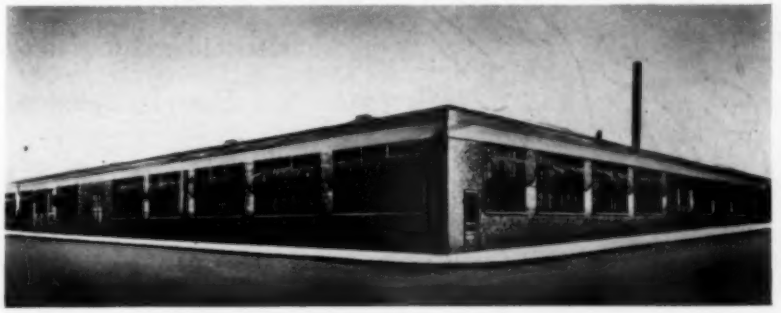
Joins Elmo, Inc.

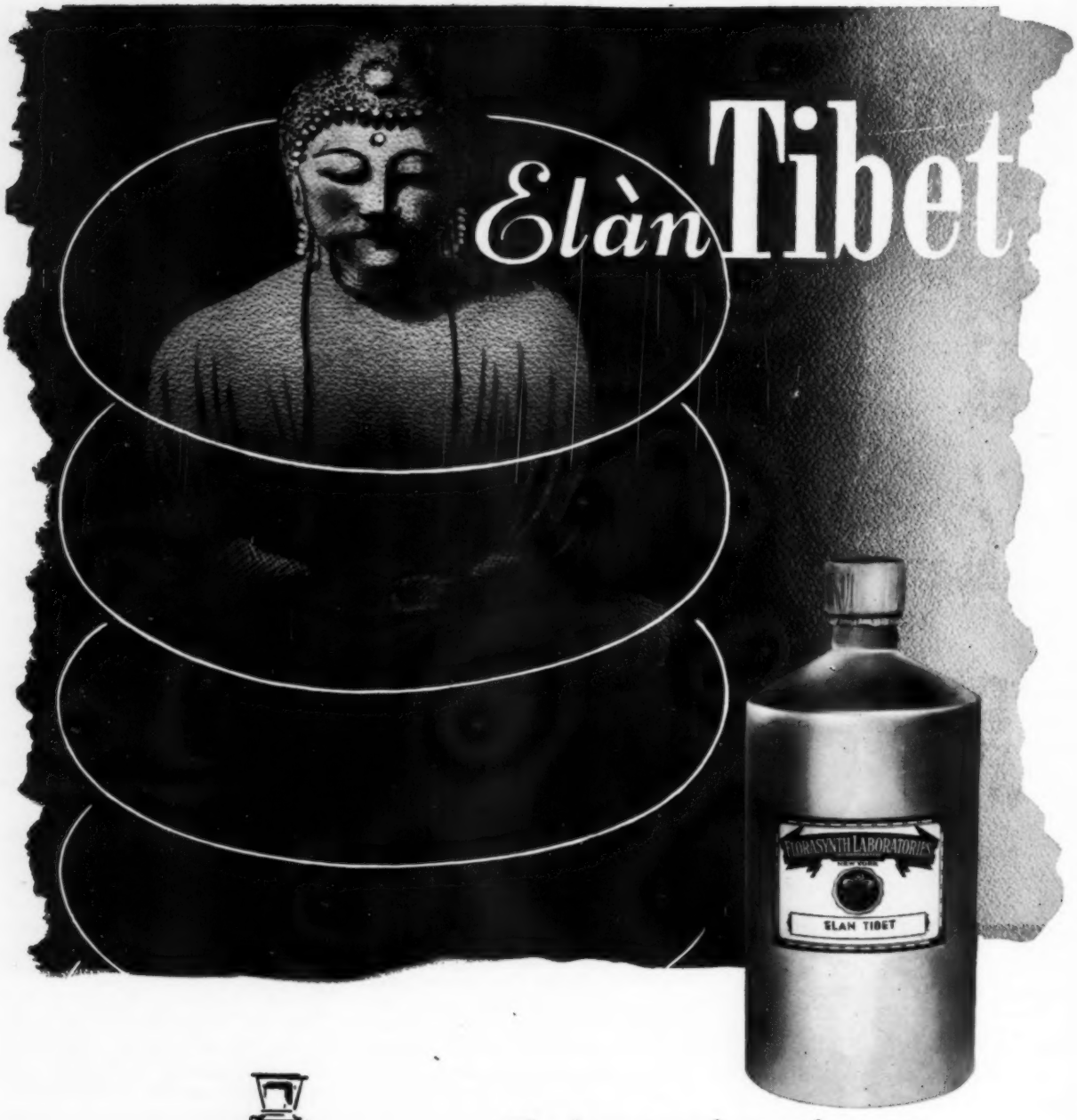
Charles Hoar, formerly associated with Avon Allied Products, Inc., and John Hudson Moore, Inc., in a production capacity and as chemist,has joined Elmo, Inc., Philadelphia, in a similar capacity.

Named Mid-Western Rep. for G. & I.

The De Lamar-Hendrey Chemical Co., Inc., 461 West Erie St., Chicago 10, has been appointed midwestern sales representative for Gane & Ingram, Inc. The company will represent G & I's full line of medicinal chemicals to the manufacturing drug trade.

New plant recently acquired by the Ivers-Lee Company as an addition to their Sanitape-Sealtite Contract Packaging facilities, which contains 45,000 sq. ft., providing straight-line, fully mechanized production from receiving platform to shipping department.





Floral creation of unusual intriguing odor...suggestive of the subtle charm and mystery of the native background with an appealing character that lends delicate bouquet to toilet waters and perfumes.

Samples upon request

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FLORASYNTH LABS. (CANADA) LTD.—MONTREAL · TORONTO · VANCOUVER · WINNIPEG · FLORASYNTH LABORATORIES DE MEXICO S. A., MEXICO CITY

SKF Wins "Dexedrine" Suit

Smith, Kline & French Laboratories won its suit against Lester Kramer, a partner, and Jack Udell, a salesman of the Evron Co. of Chicago in late March for counterfeiting SKF's "Dexedrine" tablets. The Federal District Court in Chicago enjoined Kramer and Udell from manufacturing or marketing the orange, triangular heart-shaped dextroamphetamine tablet which imitates SKF's product.

SKF pointed out that it has promoted the new heart-shaped design extensively and has established it as a means of identification. The firm announced further its intention to continue prosecution of the manufacturers and distributors of counterfeit "Dexedrine" and "Benzedrine" tablets.

Chem. Firms in Patent Suit

American Home Products Corporation was the principal defendant in a $1,000,000 damage suit filed in Federal court by Francis E. Martin of Martin Laboratories, West Chester, Pa., last month. Mr. Martin charged that this company, along with Sears, Roebuck & Co. and the Read Drug & Chemical Co. of Baltimore had infringed on a patent he has for a device used in the treatment of mastitis in cows. Co-defendants also named in the suit were five subsidiaries: Home Products International, Ltd.; Wyeth, Inc.; Wyeth International, Ltd.; Ayerst, McKenna & Harrison, Ltd.; and Fort Dodge Laboratories, Inc.

SAACI Golf Outings

The Salesmen's Association of the American Chemical Industry has scheduled its first summer golf outing at the Nassua Country Club, Glen Cove, L.I. on June 6. Additional outings will be: Bonnie Briar Country Club, Larchmont, N. Y., July 11; Montclair Country Club, Montclair, N. J., August 16; and Westchester Country Club, Rye, N. Y., September 12.

Receive Haitian Medal

Dr. D. K. Kitchen, director of medical research for Bristol Laboratories, and Dr. Charles R. Rein, associate clinical professor of dermatology and syphilology, New York University Medical School, were given the Medal of Honor and Merit of the Republic of Haiti last month. The presentation was made by Ambassador Joseph Charles at the Haitian Embassy in Washington, D. C. The award was in recognition of medical research carried on in 1947 and 1948 in Haiti.

Backstrand Named Armstrong Pres.

C. J. Backstrand was elected president and H. W. Prentis, Jr., chairman of the board, of Armstrong Cork Company, at a meeting of the directors in April. Mr. Prentis retired as president after serving sixteen years in that capacity.

C. J. BACKSTRAND

KENNETH O. BATES

Kenneth O. Bates was re-elected vice-president and designated executive vice-president, while C. Dudley Armstrong was re-elected vice-president and secretary and Joseph C. Feagley, general manager of the glass and closure division, was re-elected vice-president.

Heyden Offers New Chemicals

Heyden Chemical Corporation is making available in pilot plant quantities a group of four diacetals of pentaerythritol, including pentaerythritol diformal, pentaerythritol diacetal, pentaerythritol dipropional, and pentaerythritol dibutyral (n). Samples and technical literature may be procured on request.

Samuel Klein Changes Address

The firm of Samuel Klein, dealers in aromatic materials, moved to new quarters at 100 Beekman Street, New York last month. The telephone number is REctor 2-4394.

DCAT "Ol" Timers' Nite"

The Drug, Chemical and Allied Trades Section held "Ol' Timers' Nite" Wednesday evening, May 10, at the Hotel Astor, at which time scrolls were presented to members of the DCAT who had retired from active service in the industry. Harold C. Green, L. Sonneborn Sons, Inc., chairman of the Section, appointed a special honor guest committee, composed of the following past chairmen not presently serving on the advisory council: William D. Barry, vice-president, Mallinckrodt Chemical Works, who was chairman in 1939; Burton T. Bush, president, Bush Aromatics, Inc., chairman in 1917; James C. Chilcott, president; Chilcott Labs., div., the Maltine Co., 1936 chairman; James DeCesare, president, White Laboratories, Inc. (honorary member of the executive committee); Philip M. Dinkins, president, Jefferson Chemical Co., Inc., 1938 chairman; Chas. L. Huisking, president, Chas. L. Huisking & Co., Inc., 1925-1926 chairman; Jos. A. Huisking, vice - president, Fritzsche Brothers, Inc., 1937 chairman; Percy C. Magnus, president, Magnus, Mabee & Reynard, Inc., 1931-32 chairman; S. Barksdale Penick, chairman of the board, S. B. Penick & Co., 1927-28 chairman; S. Barksdale Penick, Jr., president, S. B. Penick & Co., 1942 chairman; Edward Plaut, president Lehn & Fink Products Corp., 1923-24 chairman; John J. Toohy, vice-president, E. R. Squibb & Sons, 1941 chairman; E. T. T. Williams, president, the Lambert Company, 1944 chairman; and Victor E. Williams, director of sales, Monsanto Chemical Co., 1943 chairman. The Toastmaster of the evening was Dr. Elvin H. Killheffer, recently retired from E. I. duPont de Nemours & Co., Inc., who served on the DCAT executive committee from 1938 to 1947.

Supplee Labs. Purchased

The laboratories of the G. C. Supplee Research Corporation of Bainbridge, N. Y., have been purchased by Foster D. Snell, Inc., industrial consultants, according to Dr. Foster Dee Snell, president. E. L. Clark will manage the new laboratory unit, as in the past.

Named to Million Mile Club

Bill Lakritz, president of Florasynth Laboratories, recently became a member of the Million Mile Club, when he was issued a membership card by United Airlines. Mr. Lakritiz was one of the first members of the 100,000 Mile Club.

Completes 25 Years as Merck Pres.

George W. Merck completed his twenty-fifth year as president of Merck & Co. on April 7. At the age of 31, Mr. Merck was elected to the presidency

GEORGE W. MERCK

during the time the illness of his father who had established the company in 1891. A graduate of Harvard, Mr. Merck joined the company in the warehouse department in 1914 at the age of 20. In the succeeding years he held various positions in the organization so that by the time he assumed the presidency he had acquired considerable knowledge of the business.

Sharp & Dohme Moves N. Y. Branch

Sharp & Dohme, Inc. moved its New York branch office last month from 345 Hudson St. to larger quarters in the Port Authority Building, 111 Eighth Ave., according to E. W. Metzger, director of domestic branches. The new branch contains general offices and warehousing facilities and is managed by George D. Grant. R. W. Tag is district sales manager.

Stanton Chemicals Co. Opened

Bettie Stanton, formerly of Stanton Laboratories, has announced the opening of Stanton Chemicals Company, manufacturers' representatives, at 340 South 15th Street, Philadelphia 2. The telephone number is Kingsley 5-7995.

Sonneborn Appointments

Robert J. Sandke and William F. Greenwald have been named co-managers of West Coast sales of petroleum products refined by L. Sonneborn Sons, Inc. It was also announced that L. B. Benjamin, who has represented Sonneborn on the West Coast for many years, will devote his activities completely to Pacific Coast sales of Sonneborn products for building construction and maintenance.

Stoutenburg Appointed Div. Mgr.

H. William Stoutenburg has been appointed manager of the northeastern sales division of Bristol Laboratories Inc., according to Richard A. Anderson,

H. WM. STOUTENBURG

vice-president in charge of sales. Mr. Stoutenburg joined Bristol Laboratories in 1946 and has been the Syracuse representative since that time.

Daniel J. Bradley

Daniel J. Bradley, fifty-eight, vice-president and director of Thos. Leeming & Company, Inc., died April 22 in Wickersham Hospital, New York, of an heart ailment. He joined the Nestle Food Company in 1918 and became an accountant for the Leeming firm in 1925. Mr. Bradley was also vice-president, treasurer and a director of Paquin, Inc. Surviving are his wife, Mrs. Ann H. Bradley; a son, Daniel W. Bradley; two daughters, Mrs. Charles Bliss and Mrs. Robert Post; two brothers, Frank J. and Joseph A. Bradley; and a sister, Helen M. Bradley.

Arthur G. Cailler

Arthur G. Cailler, specialist in menthol crystals and in essential oils, with offices at 17 East 42nd Street, died last month at the Hotel Claridge, Atlantic City, where he was visiting for the Easter week-end. He was sixty-three years of age. Mr. Cailler, who lived in Mount Vernon, N. Y., established his own drug brokerage in New York at the age of eighteen and headed it at the time of his death. Surviving are his wife, Mrs. Ruth Davis Cailler; a daughter, Barbara Jane Cailler; two sisters, Mrs. Louisa M. Flierl in Germany and Mrs. Esther P. Graeme in England; and a brother, Hugh E. Cailler, of New York.

Mrs. W. H. Chilson

Mrs. W. H. Chilson, mother of Francis Chilson, died April 9 at her home in the Borough of the Bronx, New York, at the age of 84 years.

F. O. Daiker

F. O. Daiker, sales manager of F. Ritter & Co., Los Angeles, died from a stroke in early April. Mr. Daiker had been connected with Ritter for the past twelve years and prior to that time had been production manager for Arden Farms for 29 years. He is survived by his wife, Mrs. Jennie Daiker.

James W. Morrisson

James W. Morrisson, honorary member and former president of the National Wholesale Druggists Association, died recently at the age of seventy-seven. Mr. Morrisson was formerly president of Morrisson, Plummer & Co., Chicago, which was later changed to Fuller-Morrisson Company. His son, Robert Morrisson, is currently president of the National Wholesale Druggists Association.

George S. Olds

George S. Olds, president and treasurer of Packers Tar Soap, Inc., died on the twelfth of April. He had been vice-president and treasurer of the firm from 1926 to 1944, when he then became president.

Leroy L. Salfisberg

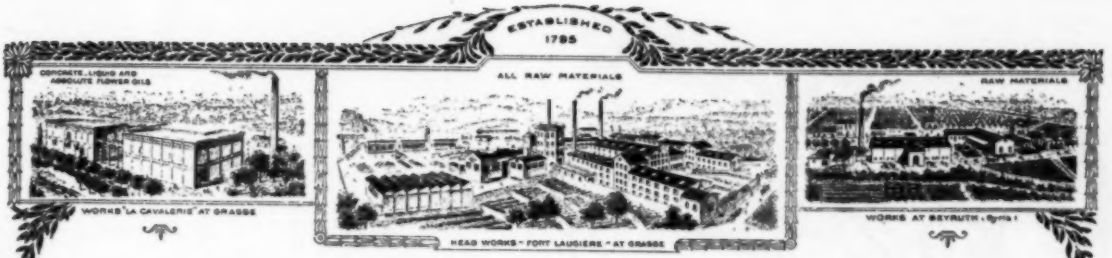
Leroy L. Salfisberg, general manager of Ivers-Lee Company, died last month following a protracted illness. Mr. Salfisberg invented the Sanitape-Sealtite method of packaging and developed numerous other specialized, patented packaging machines. He is survived by his widow, Evelyn Peterson Salfisberg, and three sons, Charles Marshall, Maclay J., and Douglas J. Salfisberg, all of whom are active in the packaging field.

Franklin H. Stafford

Franklin H. Stafford, president of the Verona Chemical Company, died in April at the Lenox Hill Hospital after a brief illness, at the age of 61. After the first world war Mr. Stafford served for many years as manager of the American Tobacco Company's cigarette paper plant at Quimperle, France. In 1938 he and his brother-in-law, E. K. Halbach, purchased control of the Verona firm, of which Mr. Halbach is vice-president.

Dr. M. Webster Stofer

Dr. M. Webster Stofer, former vice-president in charge of advertising of the Norwich Pharmacal Company, died April 17 in Phoenix, Ariz., at sixty-three years of age. Dr. Stofer joined the company as medical director after the first world war.



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SAL HEPATICA
BROMO SELTZER
WILLIAMS SHAVING SOAP
SQUIBB DENTAL CREAM
HINDS HONEY AND ALMOND CREAM
YARDLEY SOAP
VASELINE
CUTICURA SOAP
VICKS VAPO RUB
UNGUENTINE

The number of manufacturers in drug, cosmetic and allied fields who have adopted machine bundling is truly impressive—and growing steadily!

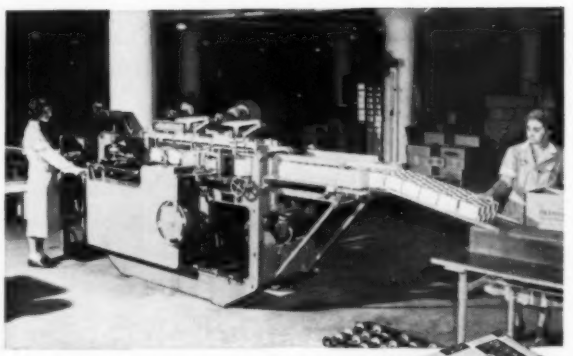
The reason is not far to seek. MACHINE BUNDLING MAKES BIG SAVINGS: First, on material costs, for it eliminates costly boxes. Second, on labor – because one machine will produce from 8 to 24 bundles per minute. And when you're pressed to get out the goods, this speedy method makes costly overtime unnecessary.

Shipping costs, too, are lowered, both to and from your plant—paper used for the bundle weighs so much less than cardboard.

The machine assembles and bundles the cartons in dozens or half-dozen lots, and is quickly adjustable for various sizes. The bundle it makes is so strong that bottled goods in cartons can safely be wrapped in this way.

Get all the facts about this potent cost cutter.

WRITE OUR NEAREST OFFICE FOR FULL INFORMATION ON MACHINE BUNDLING



Illustrated is one of our Model F-6 bundling machines recently installed in the R. L. Watkins Company factory for bundling Dr. Lyon's Tooth Powder.

PACKAGE MACHINERY COMPANY
Springfield, Massachusetts

NEW YORK CHICAGO BOSTON CLEVELAND ATLANTA
DALLAS DENVER LOS ANGELES SAN FRANCISCO SEATTLE
TORONTO MEXICO, D.F.

PACKAGE MACHINERY COMPANY
Over a Half Billion Packages per day are wrapped on our Machines

MANAGEMENT FORUM

By Francis Chilson
Industrial Consultant

Multistorey Modernization

For a long time I have been discussing the pros-and-cons of single storey construction. From now on I shall discuss multistorey problems because I am aware that the majority of the plants in the trade are multistorey buildings. This is true in urban areas and—more's the pity—it also is true in small town areas.

Because of investment in existing buildings, the majority of you will never have an opportunity to build a new plant, however much you would like to. It is easy to understand why city factories are of necessity multistorey buildings. It is difficult to understand why firms which located originally in suburban or small town areas where land was dirt cheap, should have found it necessary to build up into the air. That pernicious fallacy, gravity flow, had a lot to do with it of course. It is indeed surprising how many people still cling stubbornly to the gravity flow theory as to an inborn religious belief. However, it is true that it is only very recently that engineers began to perceive the relationship between operating costs and building design.

In some instances plants located in suburban or small town areas have had to build multiplestorey additions because they could not afford to junk the old plants—or thought they couldn't—and since they did not have the foresight originally to acquire enough land, they were forced to build up in the air. I know one firm in a small town, however, that owns over thirty acres and yet every building ever built by the owners was a multistorey unit!

It is interesting to observe how plant design was influenced by the practice of the old textile mill owners. This is especially noticeable in New England where a good many drug and cosmetic firms occupy buildings that look very much like the textile plants. It is interesting to observe that when the textile industry began migrating south, the mistake of building multiplestorey units was not made again. So far as I have observed there are no new textile mills down south that are not single storey.

So you're stuck with a nice multistorey building and you wish to do something with it to lower operating costs and increase the capacity of the building? We'll assume for a moment that you have only one building to deal with and not several. I haven't seen your building perhaps, but I'll make a bet that the office is on the first or second floor in the most desirable production space and hence exactly where it shouldn't be.

Offices generally are on the first or second floor because Mr. Big himself usually decided where the office was to be located. He'd be damned if he'd walk up two or three flights of stairs—let the factory hands do that—and he won't install a push button elevator so that the office could be placed on the top floor where it should be. Push button elevators cost a couple of thousand dollars. That's a lump sum. Mr. Big can see that. It is difficult to make him see that when the office is located in the wrong place the price of many elevators is buried in operating costs. It doesn't take much extra handling or much handling distance to add thousands of dollars to operating costs.

Before going into details let me say you will find it less confusing to handle the modernization project if you thoroughly think out your departmental grouping before putting anything on paper. Then proceed with your layout as if the building were entirely empty. When the ideal layout has been completed compare it with the existing layout to see how closely you can approximate the ideal layout in modernizing the old layout without moving too many expensive installations. Don't be afraid to move expensive installations even though in some departments the savings cannot be economically justified. Keep your mind on the overall plant problem. Remember your job is to reduce total operating costs and to increase potential plant capacity. When there is no way of achieving the end result by not moving an expensive installation, move it.

Sometimes by not being too rigid-minded about the ideal layout, you can achieve practical results without entailing removal costs that might defeat your ultimate ends in making the rearrangement.

In your approach to the problem I would recommend the following principles: keep all manufacturing, packaging and storage functions as close to the ground as you can. Place all non-productive functions in the upper storeys:—offices, laboratories, lunch rooms, cloak room etc. The maintenance shops should be placed in the basement where the power plant is located. If the basement is large enough and is dry and airy, you might consider it as an alternate location for the locker and lunch rooms.

The thing to remember is: place all non-productive areas above or below operating areas. If your building has a small wing all non-productive functions might be grouped in it if it is large enough.

The next problem is to consider the disposal of the storage and manufacturing areas. There are two ways of approaching this: one is to locate manufacturing and packaging departments all through the building and place on the same floor with each department the supplies it uses. This is a very common error. But it is understandable, because when the layout is first made, you can point out how convenient it is to have the supplies used by each department on the same floor with it. You also can point out that the storage areas can also be used as expansion space as departments grow.

When departments grow and use up the stores space, what then do you do with your stores? Ultimately you are forced to consolidate and before you can again do an over-all job you may find your self renting outside warehouse space and you may have a terrifically expensive material handling job on your hands.

A little analysis will show the futility of the described arrangement. The floors in multistorey buildings usually are all the same size. But the departments that go on them are not. Neither is there any balance between the ratio of cubic storage space required and the floor space occupied by particular departments. It is obvious of course that in the average multifloor building it is impossible to store on the packaging department floor all the supplies required by it. You can store on such a floor only the supplies currently being used by the department. Manufacturing departments all vary as to storage requirements. Thus a liquid department would have need of considerably less storage space than a tablet department.

There is but one answer: stores should be consolidated. Operating floors should have space only for stores currently being converted.

How then does one provide expansion space for operating departments? One doesn't; that's the hell of operating a multistorey building. You must provide within each department as much expansion space as is practical at the beginning. Then try to arrange the manufacturing departments so that departments with relatively little equipment are salted through the departments which have a lot of expensive installations. Then when expansion of the expensive departments is required the lesser departments can be moved out bodily. Where do you put such departments? Into the warehouse space. For a while you can always make some extra space by tighter piling and fewer aisles. When you can't consolidate stores anymore there's no alternative but to start renting outside storage space.

Now the question is: if manufacturing, packaging and stores are all to be consolidated, where should stores be located? Looked at from a strict material handling standpoint and from the standpoint of logic also, the flow of material in a multistorey building should be *upward* and not downward as is the customary procedure. A case of finished stock represents several cases or part cases of materials. It represents a case of empty containers; almost a case of raw materials; part of a case of caps, cartons, labels, circulars, wrappers, display boxes, case liners or other packing. In other words several cases of materials much be handled and transported to make one case of finished stock. When all these cases are transported up into the building on elevators, they all have to be transported down again in elevators floor by floor, and they are never consolidated finally until they reach the packaging floor.

Gravity flow is a meaningless phrase in our industry; it applies to a few liquids, a few powders and a few types of cases. Everything else we handle must be handled on elevators. Up and down—endlessly.

Habit is one thing; logic and economy are other things. This subject will be explored in subsequent issues.

The following information is supplied by manufacturers of the equipment described and claims made below by these manufacturers are passed along for what they are worth. Presentation of such notice in this department is not to be taken as endorsement of the claims or of the equipment.

Sludge Pump

A bladeless trash pump is offered by Fairbanks Morse & Co., 600 S. Michigan Ave., Chicago for pumping sludges and sewage containing trash. It could be used in the drug trade for pumping exhausted drug marc to disposal points. Tests showed that whole oranges dumped in to the effluent came through without bruising. Even big hunks of canvas.

Fork Truck

A hand guided fork truck is being offered by Yale & Towne, 4528 Tacony, Philadelphia 24. This truck is particularly recommended for multistory buildings and for cramped quarters where conventional power driven fork trucks cannot be used.

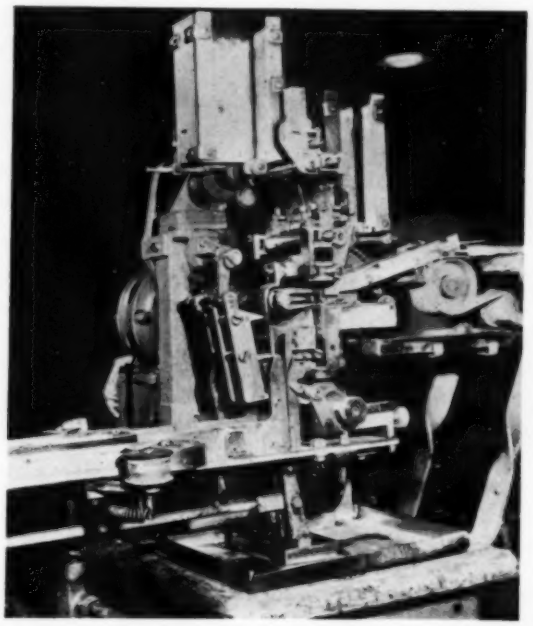
Brochure on Roller Mills

Western Roy Alan Corp. has prepared a new brochure describing its line of stainless steel roller mills. The brochure is available on request to the company at 20830 South Normandie, Torrance, Calif.

New Automatic Wrapper

Illustrated here is a picture of the Van Buren Wrapping Machine Model "M-S" which is one of three in a series of wrapping machines which are being marketed to the trade in general for the first time.

Heretofore, the company has designed and built automatic machines almost exclusively for one of America's leading soap manufacturers. The above models have been extensively used on high speed production lines. These models will handle inside and outside wraps fed either from a roll or in single sheets using any of the standard papers including wax and cellophane.



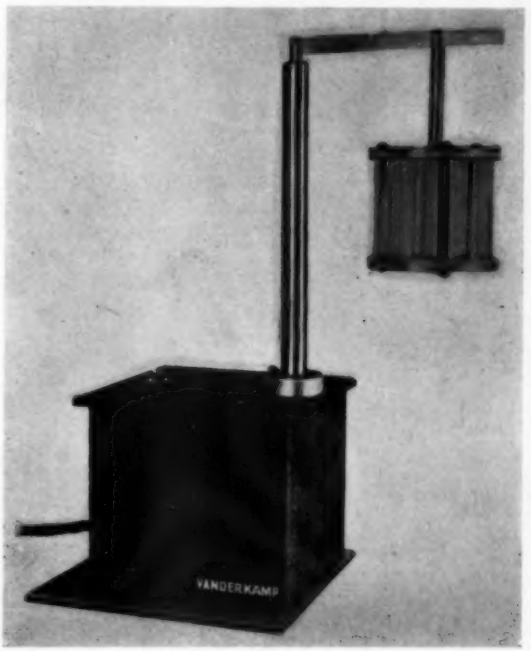
Speeds range up to 200 per minute for Model "S", 200 per minute for Model "W-W" and up to 400 per minute for chewing gum on Model "M-S" and 300 per minute for other packages.

Tablet Disintegration Tester

A new mechanical apparatus for standardized testing of disintegration rates of tablets, pills, and similar items is available from J. J. Vanderkamp, Instrument Maker, of 150 High Street, West Orange, N. J. This tester is an improved application of the standard test procedure proposed by Drs. Stoll and Gershberg in the Journal of the American Pharmaceutical Ass'n. (Sept. 1946). This method specifies a six-cell screen-bottomed carrier which is moved in a 5.5 cm. vertical stroke in and out of a constant temperature bath at the rate of 28 to 30 strokes per minute. Since this procedure for the first time provides a suitable standard for measuring the disintegration rates of pharmaceutical products, it will be described in the 14th Edition of the U. S. Pharmacopoeia.

J. J. Vanderkamp is now making this Stoll-Gershberg type Tablet Disintegration Tester commercially available in an improved form which also provides in one compact unit the motive power to immerse the carrier at a constant and fixed rate.

The carrier is a Lucite and stainless steel frame holding six glass tubes in position against a 10-mesh stainless steel screen. Six specimens from one or different lots may thus be tested at one time. A socket for holding a thermometer is also provided. This basket-like unit is suspended from a notched horizontal arm extending from a vertical shaft, at a height permitting clearance of a 12″ deep constant temperature bath. The shaft is moved up and down in the prescribed 5.5 cm. stroke by a constant speed steel-geared reduction motor and an eccentric cam. The shaft is equipped with



Oilite bearings at all points of friction for smooth and quiet operation. The column in which the vertical shaft moves is mounted on a 6 x 6 x 6″ steel case which houses the motor unit. The column and shaft are nickel-plated brass while the case is finished in grey crackle enamel. An on-off switch is provided on the case. All parts are precision machined for completely noiseless operation at all times.

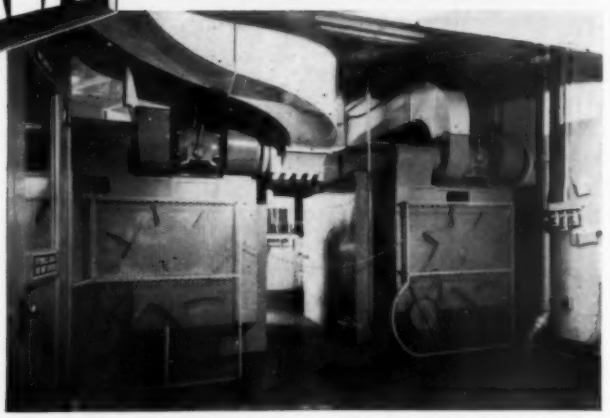
Besides the Stoll-Gershberg disintegration tests, this apparatus may be found useful with little adaptation for determining the dissolving rate for soap and similar products, or for rusting tests of metals. The unit, complete with Stoll-Gershberg carrier, is priced at $100.00 F.O.B. West Orange, N. J. Other models can be developed to special order. For further information write to the above address.

Barnstead

Barnstead Still & Sterilizer Co., Inc., of Boston has issued a new comprehensive catalog which describes in detail the difference between distilled and demineralized water. This 20-page catalog highlights the advantages of either distilled water or demineralized water as used

STERILE AREA

plus..



low relative humidity

ABOVE: Aureomycin and penicillin are packed in this "Sterile Area" at Lederle Laboratories.

BELOW: These two Lectrodryers hold the air, at 6% relative humidity in this area.

Control the quality of air surrounding processes, just as you control materials going into products. Lederle Laboratories Division of American Cyanamid Company consider this an essential rule for quality production. Besides sterilizing the air, they hold it at a constant temperature and low humidity.

Lectrodryers DRY the air fed to these areas, working with automatic controls to hold moisture at the desired low level.

Are high humidities hampering your production—interfering with the flow of materials, slowing down drying operations, causing chemical reactions to go astray? Moisture contaminates everything it touches, spoiling many a product in process and storage.

Lectrodryers remove that moisture, working at atmospheric or high pressures, DRYing air, gases and organic liquids. For DRYing help, write Pittsburgh Lectrodryer Corporation, 309 32nd St., Pittsburgh 30, Pennsylvania.

In England: Birlec, Limited, Tyburn Road, Erdington, Birmingham.
In Australia: Birlec, Limited, 51 Parramatta Road, Glebe, Sydney.

LECTRODRYERS DRY
WITH ACTIVATED ALUMINAS

LECTRODRYER
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in manufacturing and processing operations which call for pure water. It answers the question "What is the difference between distilled and demineralized water?"

It also cites case histories on quality control of water that has resulted in better products, uniform results, fewer rejects, and the reduction of costs in plant operations. It shows how ion-exchange purification works with the catalog containing more than 30 illustrations.

The manufacturer offers to send Catalog 123 to anyone interested in pure water and states that the Barnstead Engineering Dept., will be glad to make recommendations on equipment for special applications. Write Barnstead Still & Sterilizer Co., 119 Lanesville Terrace, Forest Hills, Boston 31, Mass.

Removable Stops for Pallet Truck Forks

Many pallet truck users have more than one size pallet making it desirable to purchase a truck with forks designed to carry their longest pallets. When shorter pallets are handled, the operator must take time to spot the truck in the pallet, stopping at a certain point to be sure that the rear wheels of the truck will drop through the spacing in the bottom boards.

A bar with two pins or legs has been designed so that it can be dropped into holes set at fixed points in the truck frame, thus the forks can be quickly fitted to any number of popular size pallets. The stop limits the distance the forks can enter and the rear wheels of the truck are always spotted for perfect operation.

Lyon-Raymond offers this new removable stop as an optional accessory to their entire pallet truck line.

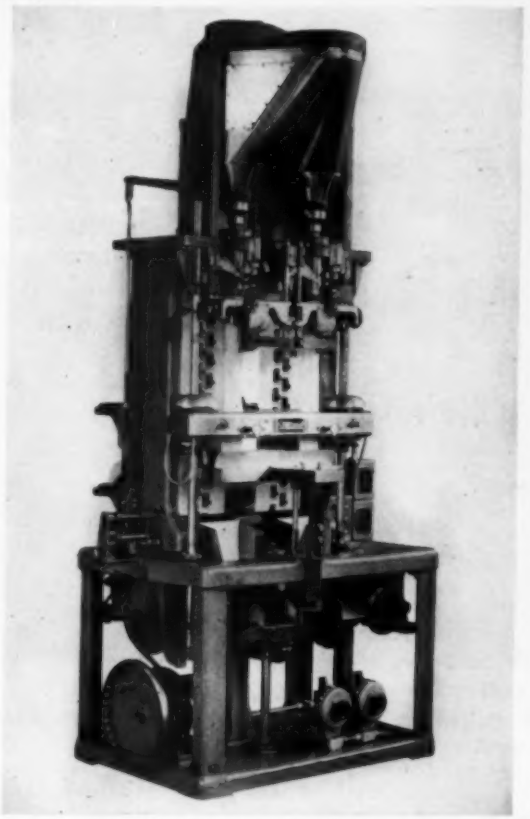
When the stop is not in use it is carried in a convenient holder on the pallet truck head frame.

Write to Lyon-Raymond Corporation 14165 Madison Street, Greene, N. Y. for complete information about the new stop bar.

Stokeswrap

Stokes and Smith Company, Philadelphia a subsidiary of Food Machinery and Chemical Corporation, announce a new development in the "Stokeswrap" Packaging Machines.

These machines, which have been produced for many years in handling heat sealing films such as Cellophane, Pliofilm, Foil, etc., can now be equipped to handle Polyethylene, the new film which has received so much publicity recently. This film has certian characteristics for packaging products requiring added protection and strength.



The machine makes the package from the roll, fills the desired amont of product and heat seals at the one operation. Printed or unprinted film can be used.

Production speeds 40 to 100 per minute, depending upon the size of the package.

Slide-Rule Vacuum Calculator Available

The F. J. Stokes Machine Company, Philadelphia, Pa., have recently developed and issued the "Stokes Vacuum Calculator," a slide-rule device to easily and quickly determine (1) the needed pump capacity to evacuate a given volume to a specified vacuum in a given time; (2) the time required to evacuate a given volume to a specified vacuum with existing vacuum pumps; (3) vapor pressure of water at various temperatures; (4) boiling points of solvents under vacuum; and (5) capacity of round tanks in both cubic feet per foot and gallons per foot.

The "Stokes Vacuum Calculator" also includes basic conversion tables for vacuum operations and other useful data.

Copies of the "Stokes Vacuum Calculator" are available at 50c each from the F. J. Stokes Machine Company, 5900 Tabor Road, Philadelphia 20, Pa. Remittance must accompany request.

Colton's *NEW* Tableting Equipment

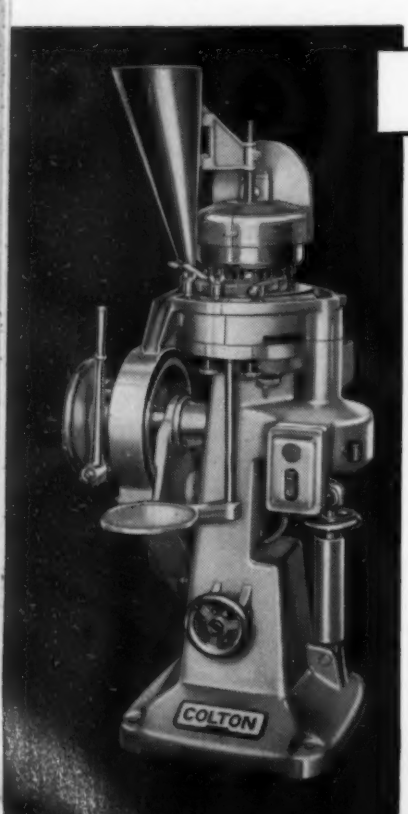
Four new units for the efficient and economical production of tablets.

1 • GRANULATOR

2 • DRYING OVEN

1 • New Colton No. 44 Twin Rotor Granulator has double the screen area plus continuous rotary operation, thereby giving 2½ times the capacity of ordinary, oscillating granulators. Delivers to trays, drums, bags. Dustproof. Accessible. Quick-change screens and rotors. Standard or stainless steel.

2 • Model 1030 takes 10 trays; 2030 takes 20 trays, 30″ x 30″ x 1″. Double steel shell, fully insulated with rock wool. Positive, uniform circulation of air from high-speed fan. Dampered inlet and outlet. All controls outside. Safety latches. Electric, gas or steam heat.



3 • ROTARY TABLET PRESS

New Colton No. 216 Rotary Tablet Press makes up to 800 tablets a minute; maximum diameter ⅝″; maximum depth of fill 1⅛″; maximum pressure 6000 lbs.; 16 punches and dies, easily changed. Variable speed drive; standard 1 HP motor. Fast, accurate, dustproof.

4 • COATING *and* POLISHING STAND

For pans up to 30″, new Colton No. 6; over 30″, new Colton No. 6A Coating Stand. Driven direct from motor through gear reducer; no belts; no slippage under load. Shafts mounted on anti-friction bearings; gears completely enclosed, running in oil. Motors ¾ HP and 1 HP polyphase.

Write for literature on these and other Colton pharmaceutical machines and name of nearest Colton field office.

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SPECIALISTS IN PHARMACEUTICAL AND PACKAGING MACHINERY FOR OVER 65 YEARS

New Drugs for Tuberculosis

(*Continued from page 515*)

coordinate the use of streptomycin with a carefully planned program of collapse therapy; this being designed to convert the sputum and arrest the disease. Streptomycin has also been of great value in the treatment of many of the complications of pulmonary tuberculosis, such as laryngitis, tracheo-bronchitis and intero-colitis. The response of these conditions is usually gratifying and there is a prompt alleviation of suffering.

The antibiotic has proved effective in early lymphadenitis and especially in the healing of draining sinuses. In conjunction with surgery, streptomycin has likewise proved its worth in genito-urinary tuberculosis and in tuberculosis of the bones and joints. Tuberculosis peritonitis usually responds very satisfactorily. In contrast is tuberculosis pericarditis, where slight improvement can be expected and tuberculosis empyema, where response is disappointing.

In the opinion of Phillips, the application for streptomycin which has probably excited the most interest is its use in the treatment of miliary tuberculosis and tuberculous meningitis. Best results are obtained in cases of miliary tuberculosis not complicated by menengitis. When meningitis supervenes during or after treatment, survival is not often expected.

Because of certain characteristics inherent in streptomycin, Pfuetze and Pyle,[14] like other authorities, believe that the drug should not be used in cases in which the prognosis without chemotherapy would be favorable. They feel that streptomycin should not be used in minimal tuberculosis or any other tuberculous condition for which other treatment is available.

In discussing the administration of the drug, these authorities note that streptomycin is given parenterally, by intramuscular or deep subcutaneous injection. However, in cases of tuberculous meningitis, remission has been sustained only when the drug was administered intrathecally as well as intramuscularly. The evidence indicates that the intramuscular route alone gives satisfactory results in all other types of tuberculosis amenable to chemotherapy. Indeed, this may prove to be the only practical method of administration.

Of course there are many reports of clinical studies in the literature and many more are in the making. Soon after Wacksman and his associates[9] had announced the effect of streptomycin on the tubercle bacillus, other workers started investigations of their own. Much of this early work was done by Feldman and Hinshaw[15,16] and they deserve much of the credit for putting streptomycin therapy on a firm basis.

Other reports by these and other workers followed in rapid succession. By June, 1947 some 1,000 cases of tubercolosis of various types had been treated by streptomycin in the United States. Indicative of the kind of data obtained is the more recent study by Kincade and his associates[17] of 100 patients with various forms of tuberculosis who were treated with streptomycin. They found, for example, that in miliary tuberculosis it is most useful in the acute exudative type in which the antibacterial effect of the drug helps the patients' natural defensive processes to control the disease. Very significant is their observation that when the drug is combined with the ordinarily accepted forms of treatment some patients who formerly had a hopeless prognosis can be saved.

Perhaps one of the most important of the later reports is that of Riggins and Hinshaw.[18] This is based on the results of streptomycin therapy as administered by a group of cooperating investigators of the American Tradeau Society. The report provided information on 332 patients who had completed streptomycin therapy and had been observed for at least 90 days after the beginning of treatment. Seventeen patients had minimal, 118 moderately advanced and 197 far advanced pulmonary tuberculosis. Of the 332 patients, 117 had a total of 204 known tuberculous complications.

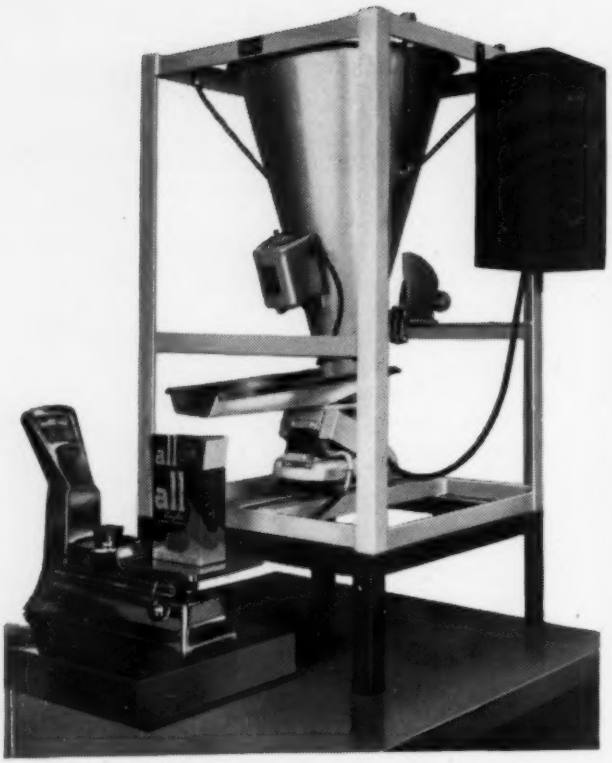
Clinical, roentgenological and bacteriological observations on these patients demonstrated that the degree of therapeutic efficiency of streptomycin is definitely related to the character of the pulmonary disease. Although improvement occurred with much greater frequency and was more pronounced in patients with predominantly acute disease, significant improvement was reported in a small percentage of patients with chronic disease. The report also stressed the observation that the larger daily doses of streptomycin seemed to bring about more frequent and more definite improvement than the smaller ones. The greater therapeutic effect was often minimized or nullified by the severer toxic manifestations incident to the larger dosage.

Among the most significant data are those made available in the "current status" reports of the Veterans Administration. In the third and most recent of these reports,[7] the investigators have put particular emphasis on the view that chemotherapy should be combined with other forms of treatment. They look with alarm at the tendency to treat patients with streptomycin on an ambulatory basis. If a patient is sick enough to receive streptomycin, he is sick enough to be hospitalized.

Hence, in presenting their statistics, the cooperative group is inclined to look on the dark side of the picture. It is stated that even in those types of disease in which the drug is particularly successful, such as tuberculosis of the alimentary tract and of draining cutaneous sinuses relapse rates are about 5 and 10 per cent. In pulmonary disease they are about 35 per cent within 12 months after the completion of treatment. There has been a mortality rate of 21 per cent in the 416 cases of pulmonary tuberculosis which have been observed for two and one-half years. Of 66 patients with tuberculous meningitis, 67 per cent have died. This figure would be even higher if miliary disease were also present.

As has been indicated, there are certain characteristics inherent in streptomycin that make it somewhat less than the ideal drug for treating tubercu osis. Thus,

(*Continued on page 569*)



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Up to 750°F.

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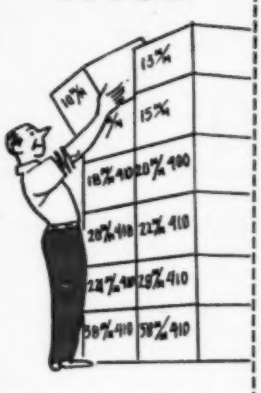

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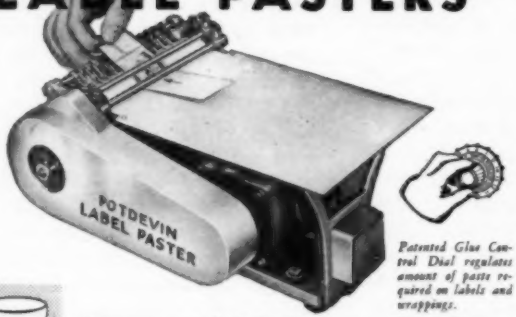

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PATENT THOUGHTS AND TRENDS

*by Thomas Cifelli, Jr., Patent Attorney**

Kicking the Patent Gong Around

Anyone who has followed the U. S. patent system even casually for the last ten to twenty years is well aware of the fact that the federal courts have considerably whittled down the rights of patent owners. This is not to suggest that a patent on a meritorious invention is not worthwhile, for as was pointed out in the January issue of this Journal the U. S. Supreme Court decided two of three patent cases in 1949 in favor of the patent owner. Nevertheless, the federal courts, encouraged no doubt by some ingenious "patent busting" patent lawyers and the U. S. Department of Justice, have during the past decade or two judicially changed the patent laws as regards the amount of protection coming within the scope of the patent rights.

During all of this time the executive and legislative branches of the federal government have been rather staunch supporters of the U. S. patent system. This may come as somewhat of a surprise to those who might have supposed that whatever changes in the patent laws were made during the period under consideration had their source in the Executive and were given statutory basis by the Congress. In this connection it is perhaps well to recall to mind two statements made by the late President Roosevelt during the last war. One was to the effect that "patents are the keys to technology, technology is the key to production, and production is the key to victory." The other statement which indicates the attitude of former President Roosevelt on the patent system is as follows:

"The American Patent System has promoted countless applications of the arts and science to the needs and well-being of our people."

Surely, such statements do not indicate antipathy towards patents.

Perhaps the strongest supporter of the patent system for years has been the Congress of the United States. I have not taken the trouble to count the number of proposals which have been made during the last twenty years for changing the patent laws, but they have been quite numerous in number and many of them revolutionary in character. Yet, Congress has done a really remarkable job of preventing legislative damage to the patent system as we know it.

In the light of the foregoing it is quite difficult to understand the most recent Acts of both the President and the Congress as regards our patent system. I refer to the President's reorganization plan No. 5 and the substantial reduction in the House of Representatives Patent Office appropriation for the fiscal year 1951 below the amount requested by the Patent Office, respectively.

Reorganization Plan No. 5

The Reorganization Plan No. 5 of 1950 was presented to the Congress presumably to implement the recommendations of the Hoover Commission for the reorganization of governmental agencies, the idea being to promote better execution of the laws, economy, and efficiency by regrouping governmental agencies and eliminating overlapping and duplication of effort. Certainly, no one should quarrel with those objectives. Actually, however, the plan provides for the transfer of the functions of the Commissioner of Patents to the Secretary of Commerce who would have the power, without the consent, advice or approval of the Commissioner of Patents to effect such transfers within the Department of Commerce, e.g., from the Patent Office to the Bureau of Standards, the Bureau of the Census or any other Bureau of the department, of any records, property, personnel and unexpended balances of appropriations, allocations, and other funds of the Department or any Bureau thereof as he, the Secretary of Commerce, may deem necessary. In other words, under this Plan the Secretary of Commerce could remove trained Patent Office personnel, who it will be noted are for the most part both technically and legally trained, and give such personnel clerical positions in other Bureaus, and, on the other hand, transfer from such other Bureaus to the Patent Office employees who have little understanding of patents.

If Plan No. 5 goes through in its present state it can only result in injury to the entire country by interfering with the efficient functioning of the Patent Office which is the only federal agency existing for the promotion of Science and the Useful Arts. Surely, the Hoover Commission could not have intended such a situation. In this connection it is of some interest to note that while the Plan is supposed to carry out the recommendations of the Hoover Commission for more efficiency, actually the plan calls for the creation of a new federal position, that of an Administrative Assistant Secretary of Commerce at $14,000 per year.

This Plan will become law by May 25th unless voted down by a majority of the members of either the House or Senate. Thus, by the time this article is read the Plan may have already become law. If so, operations under the Plan will have to be watched very carefully.

Patent Office Budget

It costs the taxpayers of the U. S. about $3,000,000 a year to operate the U. S. Patent Office. This figure represents the difference between the amount appropriated by Congress for the Patent Office and the total amount that the Patent Office receives in fees from patent and trade-mark applicants. This operating deficit is almost literally a drop in the bucket when compared with the over-all federal budget of billions and billions and billions. When one considers the amount of good in terms of advances in Science and the Useful Arts and general over-all increase in the standard of living in the U. S. brought about by this small annual operating deficit it is clear that the taxpayers are getting at least a hundred cents on each dollar that they spend for the Patent Office.

The Congress has recognized this over

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the years and has in general been quite cooperative in meeting Patent Office budget requests. Doubtless, one of the reasons why Congress has been inclined to go along with Patent Office estimates is the fact that such estimates have been real estimates and not based on inflated, boondogling operations. This year, however, the House has seen fit to cut the Patent Office budget request of $11,760,000 for the fiscal year 1951 by $460,000. No doubt this action was inspired by economy reasons and does not represent anything more than an arbitrary cut. While such economy action on the part of our Representatives is commendable, it is nevertheless an odd commentary that the House should become so economy-minded when dealing with the Patent Office, which is part of a system which has done so much for our country in making it prosperous and strong and which is continuing do to so much in those two directions, while at the same time the House was, to say the least somewhat generous in giving the taxpayers money away.

There is little doubt that the House failed to realize the consequences of the $460,000 reduction. As is generally known there is a tremendous backlog of patent applications confronting the Patent Office right now. Consequently it must maintain the present examining force, otherwise the backlog will continue to grow. This in practical terms means that inventive incentive will be discouraged, as only the most hardy will see their way clear to attempt to get patent protection if the present 2-3 year average prosecution period is going to be increased, as it doubtless will because the $460,000 cut-back would reduce the examining staff by about 75 examiners. It would also require the Patent Office to destroy a hard-won equitable salary program for the examining staff. Other consequences of this House cut-back would be:

1. A serious curtailment of the production in the patent examining operations.
2. A high turnover of patent examiners due to a lack of financial incentive with the result that production is curtailed.
3. A violation of the Classification Act of 1949 which specifies that employees shall be paid on the basis of equal pay for equal work.
4. A demoralized examining staff.

The $460,000 item will prevent the Patent Office from issuing the 7,000 additional patents contemplated, the printing cost of which amounts to $231,000 alone. For the 7,000 additional patents issued the Patent Office would receive $210,000 in fees.

The present budget includes the increase in printing costs imposed upon the Patent Office by the Government Printing Office equaling perhaps another $230,000, which in addition to the printing of copies is equivalent to the reduction imposed by the House Appropriations Committee.

It thus looks as if a good bit of the excellent work done by the recent Commissioners of Patents as well as present Commissioner Marzall will be nullified. These men have striven mightily to build up a strong examining corp to the present state where the tremendous war-borne backlog of patent applications is being reduced and better examination of applications is being effected. This appears to be small reward to the many hard working technically and legally trained examiners who are real career men. It was bad enough that they were shuttled back and forth between Richmond, Virginia and Washington, D. C., presumably in the interest of the war effort, and are now operating under adverse conditions (e.g., the desk of one Examiner literally touching those of his colleagues on the right and left and being within practically arm's length of his colleagues in front and to the rear). Now it appears that they are not even going to get the equitable (not high) salary increases they had been led to expect and that many of them are going to be fired without cause at a time when there is a crying need for their services.

It may be too late to stop the $460,000 cut-back from being put into operation as the Senate appropriation committee is to take the matter up during the week of April 24. It may also be too late to do anything about Plan No. 5. However, the next time you may be inclined to throw a verbal brick bat in the direction of the patent system because of its delays, etc., why not drop a line to your Congressman or Senator. Yes, that would be quite a bothersome chore, but if enough people do it, it would probably go a longer way in protecting this country than would the strength of many divisions. Is your country worth it?

Menthyl Aromatics

The already large list of aromatic chemicals was further increased by the contribution of Richard B. Wearn and Carl Bordenca who recently obtained U. S. patent 2,501,199 (assigned to Food Machinery and Chemical Corporation). While the inventors disclose a number of compounds, i.e. 2-p-menthyl carbinol and its esters and state that the carbinol has a sharp sweet odor somewhat like that of geraniums and the esters have pleasant, persistent odors, they only succeeded in obtaining one claim and that to the 2-p-menthyl carbinyl acetate.

The carbinol is produced by reducing the corresponding aldehyde. The latter is prepared from limonene or dipentene by first hydrogenating the double bond on the side chain, and then reacting the resulting Δ'-p-menthene with carbon monoxide and hydrogen in the presence of a hydrogenation catalyst. The process for converting the aldehyde to the carbinol is covered by U. S. 2,501,200 obtained by Wearn and assigned to the same company.

Details for making the aldehyde, the carbinol, and the acetate follow:

Preparation of 2-p-menthane aldehyde

A high pressure reactor of 685 cc. capacity was charged with 76 grams of Δ'-p-menthene (prepared by partial reduction of limonene over nickel-on-kieselguhr catalyst) and 5 grams of cobalt-on-kieselguhr catalyst. Carbon monoxide was introduced to 1250 p.s.i. and then hydrogen to a total pressure of 2300 p.s.i. at 26°C. Then agitation was begun, and the reaction was heated at 140-150°C. for 2 hours. After cooling, the charge was removed, filtered, and fractionally distilled. There was obtained 26 grams of 2-p-menthane aldehyde, B.P. 53-54° C./1-2 mm., n_D 1.4526.

Preparation of 2-p-menthyl carbinol

A solution of 37 grams of aluminum isopropoxide in 200 cc. of anhydrous isopropyl alcohol was prepared. To this was added 30 grams of 2-p-menthane aldehyde (which may be prepared by reaction of limonene or Δ'-p-menthene with hydrogen and carbon monoxide in the presence of a suitable hydrogenation catalyst as shown in the patent application referred to above). The solution was refluxed for 3 hours, approximately two-thirds of the solvent was removed by distillation, and then the residue was poured into a mixture of ice and dilute hydrochloric acid. The oil which separated was washed with water, dried over anhydrous calcium sulfate, and distilled. There were obtained 28 grams (92 per cent yield) of 2-p-menthyl carbinol; B.P. 80°/1-2 mm.; n_D^{30} 1.4637; den. $20^{0.916}$.

Analysis: Calculated for $C_{11}H_{22}O$: C, 77.58%; H, 13.02%. Found: C, 77.09%; H, 12.70%.

Preparation of 2-p-menthyl carbinyl acetate

A mixture of 10 grams of 2-p-menthyl carbinol, 2.2 grams of anhydrous sodium acetate, 6.5 grams of acetic anhydride, and 12 cc. of anhydrous benzene was refluxed for 4 hours. It was then poured into water and the benzene layer

(*Continued on page 609*)

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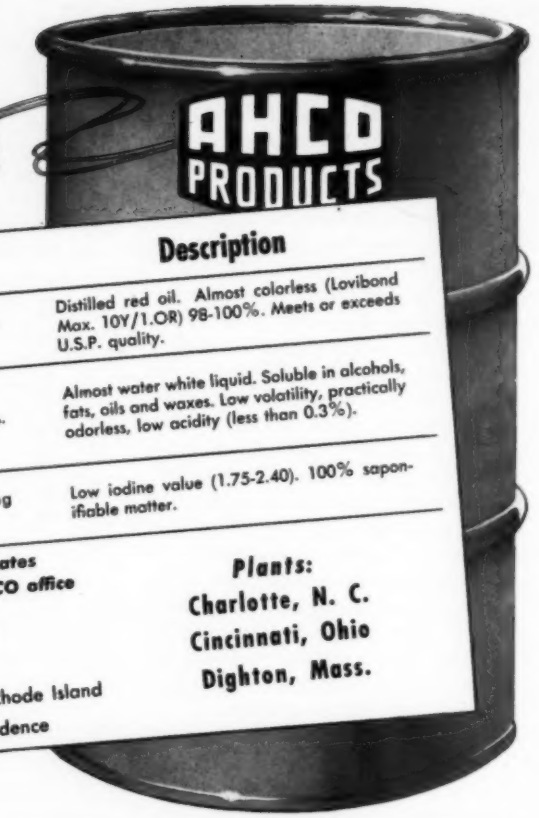

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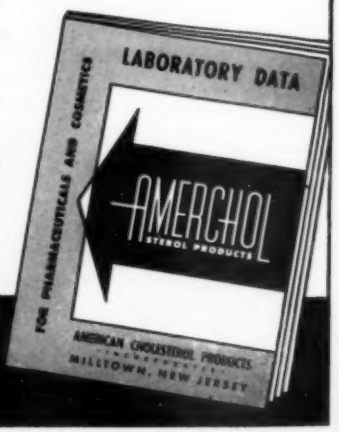

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INDUSTRY'S BOOKS

The Cost and Financing of Social Security, by Lewis Meriam, and Karl Schlotterbeck, 187 pp., The Brookings Institution, Washington, $3.00.

In recent years attention has been increasingly given to security of the individual—with the federal government providing protection against the unforeseen accidents and hazards of life. This book surveys the programs recommended, as well as those now existing; the benefits involved; and the rapidly growing burden of costs. The authors show how these proposed welfare plans would ultimately have to be paid for and analyze the insurance mechanism employed in supplying benefits for old-age survivors, and disability. The object of the study is to focus attention on the magnitude of the expanding costs, and the problems involved in financing them, and to raise the question as to whether a safer and better system could readily be devised.

A General Kinetic Theory of Liquids, by M. Born, F.R.S., and H. S. Green,—Six papers Reproduced by Permission from the Proceedings of the Royal Society, 98 pp., The University Press, Cambridge, $2.25.

The six articles collected in this volume have appeared during the past two years in the Proceedings of the Royal Society. Five of the papers carry the common title "A General Kinetic Theory of Liquids." The Fifth, however, is of a more general character, dealing with the kinetic foundations of thermodynamics in general. Contents: I. The molecular distribution functions. II. Equilibrium properties. III. Dynamical properties. IV. Quantum mechanics of fluids. V. The kinetic basis of thermodynamics. VI. Liquid He. II.

Fundamentals of Pharmacy, by Walter H. Blome, Ph.C., Emeritus Professor of Pharmacy. Wayne University College of Pharmacy, and Charles H. Stocking, Ph.C., Dean, University of Michigan College of Pharmacy, Second Ed., 312 pp., Illus., Lea & Febiger, Phila., $5.

The text matter for this Second Edition has been completely revised to bring it in line with the latest revisions of the United States Pharmacopoeia and National Formulary. The chapter on Ointments, Cerates and Pastes has been largely rewritten by Dr. E. I. Cataline of the University of Michigan College of Pharmacy. The information it contains is based upon the results of considerable research upon the use of water-soluble and other recently developed ointment bases. The chapters on Biological Products and Animal Products have been completely rewritten by Mr. Robert L. Jones, chief biological chemist of an internationally known pharmaceutical manufacturer. The first part of the book is devoted to a consideration of the services which the pharmacist renders to the public and to a discussion of the practical applications of principles. Part II covers kinds of pharmaceutical preparations, with comments and explanatory statements concerning their manufacture. Many large-scale manufacturing processes are outlined, a knowledge of which is essential to intelligent practice.

A Concise Applied Pharmacology and Therapeutics, by F. G. Hobart, Ph.C., Member of the Pharmaceutical Society, and G. Melton, M. D., Physician to the Northern Hospital, Winchmore Hill, Third Ed., 234 pp., Leonard Hill Ltd., London, $2.50.

This volume presents concisely, but in sufficient detail, the pharmacology of the more important drugs used in the British Commonwealth and the United States. Considerable pruning of the monographs relating to drugs of secondary importance was done in this new edition, to make room for the inclusion of much new matter, especially in regard to chemotherapeutic agents, hormones and vitamins, and an attempt has been made to provide sufficient detail for the intelligent clinical use of the products named.

Research In Medical Science, Edited by David E. Green, Ph.D., and W. Eugene Knox, M.D., 492 pp., The MacMillan Co., New York, $6.50.

This book presents in essay form many of the latest developments in medical research. The twenty-six essays included are written by various outstanding representatives in the fields of chemotherapy, therapeutics, physiology, epidemiology, microbio ogy, anthropology, and allied sciences. These authorities offer non-technical accounts on such diversified subjects as viruses, immunochemistry, isotopes in medicine, endocrinology in cancer research, pediatrics, hypertension, direction of surgical effort, neurology, psychiatry, etc. The essays cover the most outstanding developments and achievements in each field to date and they indicate the most likely paths of future progress. Because of its broad scope, this volume will be of interest to bioscientists, physiologists, bacteriologists, pharmacologists, research nutritionists, clinicians, and medical men. The layman interested in medical research will also find it easily readable.

The Chemistry of Industrial Toxicology, by Hervey B. Elkins, Ph.D., Chief of Laboratory, Division of Occupational Hygiene, Massachusetts Department of Labor and Industries, 406 pp., John Wiley & Sons, Inc., New York, $5.50.

The emphasis in Dr. Elkins' book is on industrial poisons themselves and the industrial processes in which they occur, rather than on the physiological effects of poisons on the human body. This emphasis is what makes the Chemistry of Industrial Toxicology different from most other books in the field. After a general treatment of poisons and the more important tests for discovering them, Chapters 3-11 offer a detailed study of over 200 industrial poisons—physical properties, harmful effects, maximum allowable concentrations, and best methods of determining whether a danger is present. Dr. Elkins then turns to the processes which produce toxic substances. He analyzes the toxic danger involved in each type of process, summarizing much of the material in easy-to-use tables. He also gives a list of maximum allowable concentrations for 203 substances in air and 12 substances in urine. The last two chapters tell exactly what equipment is needed to test for toxic substances and what procedures should be followed. Step-by-step procedures are given for the detection of 64 substances in air and 12 in urine.

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New Drugs for Tuberculosis

(Continued from page 561)

there is evidence that the antibiotic has toxic potentialities,[11] especially with prolonged treatment. The most important, and by far the most common, is the loss of vestibular nerve function. On very rare instances, deafness may be produced, but only following larger doses or where streptomycin excretion is defective.[12] Thus, in the earlier days, when fairly large doses and prolonged treatment was used (e.g. 2 Gm. daily for 120 days), about 80 per cent of those so treated showed some vestibular damage, as evidenced by vertigo.[7]

However, as was pointed out by Pfuetze and Pyle,[14] the potential toxicity of streptomycin is no longer of great moment because it has been learned that in most cases the therapeutic dose of the agent is appreciably less than the toxic dose. Indeed, only a small proportion of patients receiving a daily total dose of 1.0 Gm. or less have shown the vestibular dysfunction which is commonly encountered when larger doses are used. These authorities feel that with the regimens now in use, the potential toxicity of streptomycin is chiefly a matter of idiosyncracy or acquired sensitization to the drug. Reactions of sensitiaztion generally appear after treatment for from one to three weeks; manifestations consisting of fever, nausea, skin eruptions, pruritus and eosinophilia. Temporary withdrawal of the drug is necessary for the abatement of reactions of any severity. However, most patients will tolerate streptomycin after a rest period, particularly if desensitization is carried out. More serious toxic effects, such as exfoliative dermatitis and aplastic anemia, have rarely occurred.

There are tuberculous conditions where the danger of toxic results is of minor importance. As remarked by Bunn,[19] toxicity to streptomycin can be ignored entirely in the treatment of meningeal tuberculosis for no single toxic event or combination of them is as serious as the inevitable outcome of the disease without antimicrobial therapy.

Since the toxicity of streptomycin has been significantly reduced through the simple means of lowering the average daily dose, says Wassersug,[3] only one significant drawback remains to its greater effectiveness. That drawback is the development of resistance (or loss of sensitivity) of the tubercle bacilli to the drug in many of the patients under treatment. Indeed, one of the greatest disappointments encountered in the streptomycin treatment of tuberculosis is the frequent tendency of the responsible organism to become resistant to the drug on prolonged therapy.[11] This increased resistance to the antibiotic can reach considerable proportions and may become as high as 1,000 times.[20]

Development of such resistance is probably the main reason why experienced clinicians avoid the use of streptomycin in minimal lesions. This is done in order to prevent possible therapeutic failure should treatment with streptomycin become necessary at a later, more serious stage. Obviously the antibiotic would prove ineffective if loss of sensitivity had occurred.

One view with respect to such resistance has been expressed by Rubin and his associates.[21] They feel that the finding of bacterial resistance to streptomycin is not of paramount importance clinically since many patients whose organisms exhibit high degrees of resistance show definite therapeutic improvement. In a chronic disease like tuberculosis, they believe that the resistance of the patients is more decisive in determining the eventual outcome than the drug resistance acquired by the tubercle bacilli.

Most workers, however, are of the opinion that methods should be developed to lessen toxicity to prevent or delay the emergence of streptomycin-resistant organisms. In the approach to solving this problem, three main avenues of approach have been followed. The first road has led to the revision of the streptomycin regimen with respect to amount and frequency of dosage, and the length of treatment time. The second has been concerned with the use of modified forms of the antibiotic, such as dihydrostreptomycin. The third approach is through the use of streptomycin in combination with other antitubercular drugs, notably para-aminosalicylic acid.

The benefits of reducing the dosage has already been mentioned in connection with the decrease in undesired side-effects. In the latest report[6] of the American Tradeau Society it is stated that for adults, 1.0 Gm. of streptomycin administered in a single dose intramuscularly is the best compromise between the greater toxicity of higher daily dosages and the lessened therapeutic efficiency of the smaller ones for all tuberculous conditions, except miliary tuberculosis and tuberculous meningitis. In the latter conditions, 2.0 or 3.0 Gm. per day are believed to be desirable.

It has also been demonstrated that the rate of development of resistance to streptomycin can be reduced by administering the drug at more frequent intervals. In such "interrupted" regimens, 1.0 or 2.0 Gm. of streptomycin is given every third day for 120 days, or daily for four weeks followed by a "rest" period of four or six weeks and then a repitition of the course. It is said[7] that the therapeutic efficacy of these regimens show very little, if any, decrease while at the same time their objective—that of delaying the emergence of resistance—seems to have been achieved.

(To be concluded)

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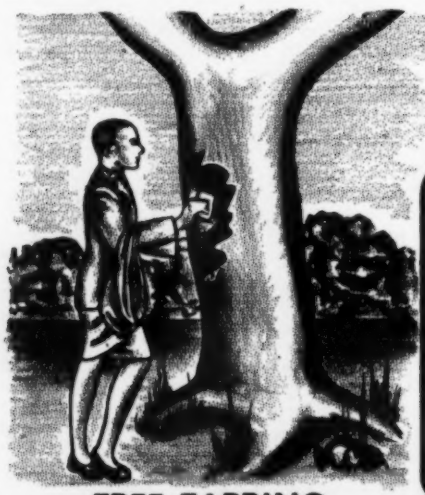

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YOUR TRADE-MARK RECORD

by John H. Graham
International Patent and Trade-Mark Consultant

Descriptive Trade-Marks

Last month we discussed the basic question of descriptiveness of a trade-mark and the factors to be considered in avoiding such an objection to your trade-mark.

But, you will say, I know of quite a number of trade-marks which are obviously descriptive and are apparently registered according to the markings on the package.

There are such marks in existence and there are several reasons for this. Back in 1905 when the first real attempt to write trade-mark laws was made, one of the things they had to do was protect the old trade-marks which had been used for years and clearly denoted origin of the goods. Many of these were old established English marks "imported" into this country.

Accordingly, whether descriptive or not, and whether objectionable otherwise or not, any mark which had legitimately been used for 10 years prior to 1905 could be registered.

Thus, some very old marks which have been renewed time and time again, are today in active use, even though they may be descriptive in some way.

The trade-mark laws of today also recognize that under some circumstances a mark otherwise objectionable may be worthy of registering. While normally, for instance a purely geographic name cannot be registered, if a person owning the mark can show that the public have accepted a mark of geographical form as denoting origin of the goods with this person, for a period of five years or more, the mark may be registered.

The same conditions apply to a surname for instance, this is called "acquiring secondary meaning," namely that the mark has been so extensively used and is so well known, that despite its faults it has acquired a meaning to the public as defining the particular owner.

Perhaps some legal decisions pro and con on this point of descriptiveness may help in explaining what is involved. They do not all appear consistent, but there is little if any consistency in law and trade-mark law is no exception.

A higher court decided that "DUMP IT" was descriptive of hydraulic devices for tilting trucks to dump the contents. "DUMP IT" was considered a descriptive phrase for the action of the device and "other manufacturers might wish to use the phrase in connection with similar devices and should not be embarrassed in so doing by meeting a registered trade-mark which implies the right of exclusive use." The second quoted part is directly from the Judges' decision. It confirms the argument advanced last month that such descriptive phrases should not be taken by one person but should be free to all.

On the other hand, PRO-PHY-LacTIC Brush Company's registered trade-mark "Perma-grip" for dental plate powder was held *not* to be descriptive. Although "grip" is descriptive of dental powder, "Perma" would not necessarily be regarded as meaning permanent in every instant, so neither "perma" nor "perma-grip" are merely descriptive of the goods.

"Paratroop Jump Boots" was held to be descriptive of boots worn by paratroopers. It was also held that if the boots were for use by the general public and not suitable for paratroopers then the mark was mis-descriptive (which is just as bad, obviously).

"Certified" was refused registration as applied to jewelry for personal wear even though it had been used for many years.

"Shredded Wheat" was held to be a descriptive term which described with fair accuracy the article to which applied and registration was refused.

In the same way, the following were refused as descriptive; "NU-ENAMEL" FOR PAINT. "AVIATION" for a magazine devoted to flying subjects; "BASSER" for fish bait used to catch bass; "VAPOR MARCEL" for vapor hair waving pads; "PROFESSIONAL" for hair pins and curlers; "NIPPY" for cheese; and "ODORADE" for perfumes, toilet waters, etc.

But the following were considered clear of the stigma of descriptiveness; "RUN-R-STOP" for material for stopping runs in stockings; "KING" for bowling pins; "CHAMPION" for spark plugs; "CLOROX" for bleaching compound; "BAIN DE CHAMPAGNE" (bath of champagne) for bath salts; and "MARCH OF TIME" for movie films.

From these decisions it is not too hard to see how close to the line of descriptiveness one can go. Pure and unadulterated description of the goods or some property thereof must be avoided. But subtle suggestions of description are permissable and often make the best marks.

"SLUMBER" for a restful bath preparation, "TWEED" for an outdoor sportstype perfume, "WHITE SHOULDERS" for a sophisticated evening perfume, are examples which all possess the subtle suggestiveness which makes a good mark.

A study of similar good sound and well established trade-marks can soon make you surely aware of the approach to take to avoid the official objection of descriptiveness.

The following Trade-Marks were recently published in the Official Gazette of the United States Patent Office.

Anron's—51—H—569,350
Ronnie B. Collins, N. Y., N. Y.
Ser. Nov. 24, 1948 D. U. Nov. 10, 1948

Armand Blended Cream—51—C—523,267
The Armand Co., Des Moines, Iowa
Ser. Nov. 19, 1949 D. U. January 1935

Armand Cold Cream Powder—51—C—523,268
The Armand Co., Des Moines, Iowa
Ser. May 21, 1948 D. U. May 1916

Birthright—52—H—569,896
Sell's Specialties, Inc., N. Y., N. Y.
Ser. Dec. 3, 1948 D. U. Aug. 27, 1948

Bois des Iles Chanel—51—B—565,235
Chanel Inc., N. Y., N. Y.
Ser. Sept. 16, 1948 D. U. Feb. 1929

Cachet—51—H—568,314
Leona Lemiux, Auburn, Maine
Ser. Nov. 6, 1948 D. U. Nov. 1, 1948

Carol Douglas—51—H—568,010
The Toni Co., Chicago, Ill.
Assignor to Gillette Safety Razor Co., Boston, Mass.
Ser. Nov. 1, 1948 D. U. Sept. 16, 1948

Compliment—51—BC—572,355
Consolidated Cosmetics, Inc., Chicago, Ill.
Ser. Jan. 18, 1948 D. U. Jan. 16, 1949

"Cuti-Clip"—44—R—570,713
Millers Forge Mfg. Corp., N. Y., N. Y.
Ser. Dec. 17, 1948 D. U. Dec. 9, 1948

Daylong—51—CS—547,146
Phipps Products Inc., DBA Daylong Co., Boston, Mass.
Ser. Jan. 15, 1948 D. U. Nov. 15, 1947

Douce France—51—BC—564,461
Parfum Lubin S.A., Paris, France
Ser. Aug. 31, 1948 D. U. Jan. 15, 1937

Ever-Strate Hair Dressing—51—H—558,152 (And Des.)
W. J. Mims, DBA Astoria Products Co., Birmingham, Ala.
Ser. May 29, 1948 D. U. Sept. 9, 1924

Evidents'—51—K—561,563
Evidents Corp., N. Y., N. Y.
Ser. July 16, 1948 D. U. May 1, 1948

Golden Anniversary—51—B—570,971
Lascoff Labs., N. Y., N. Y.
Ser. Dec. 22, 1948 D. U. Dec. 16, 1948

Jardin Blanc—51—B—539,638
M. R. Bocher, DBA Mainbocher, N. Y., N. Y.
Ser. Oct. 31, 1947 D. U. Oct. 16, 1947

Kasur—51—BCDEHK—563,885
Jose Soler Perez, Habana, Cuba
Ser. Aug. 20, 1948 D. U. Sept. 29, 1945

L/A—51—D—579,139
Lide S. Sims, Mullens, W. Va.
Ser. May 19, 1949 D. U. Mar. 31, 1949

La Cross—51—ABCEH—516,096
Schnefel Bros. Corp., Newark, N. J.
Ser. Apr. 7, 1948 D. U. Since 1922

Laurendor—51—BCK—549,538
Salvador Gil-Notari, Barcelona, Spain
Ser. Feb. 12, 1948 D. U. Feb. 9, 1942

Le Quai Aux Fleurs—51—BC—567,517
Guerlain, Inc., N. Y., N. Y.
Ser. Oct. 23, 1948 D. U. July 27, 1948

Lik—52—M—572,928
A. J. Saxon, DBA Mars Chemical Co., Tonawanda, N. Y.
Ser. Jan. 27, 1949 D. U. March 24, 1948

Little Bo-Pink—VI—C—559,686
Dermetics Inc., N. Y., N. Y.
Ser. June 19, 1948 D. U. May 17, 1948

Magi-Curl—51—G—566,787
Beauty Factors Inc., Los Angeles, Cal.
Ser. Oct. 11, 1948 D. U. Sept. 3, 1948

Merrit—51—BIKM—562,391
National Toilet Co., DBA Merrit Products Co., Paris, Tenn.
Ser. Jan. 28, 1948 D. U. Jan. 30, 1942

Mouche—51—BC—565,359
Parfums Marcel Rochas, assignor to Parfums Rochas, Inc., N. Y., N. Y.
Ser. Sept. 17, 1948 D. U. Jan. 15, 1948

Old Hermit—51—H—569,755 (And Des.)
Jerry Jerome, Miami, Fla.
Ser. Dec. 2, 1948 D. U. Mar. 2, 1948

Pink Fern—51—B—549,074 (And Des.)
Centa Iserman, Nee Cossman, Summit, N. J.
Ser. Feb. 7, 1948 D. U. Oct. 2, 1947

Pretty Package—52—A—522,861
Harriet Hubbard Ayer Inc., N. Y., N. Y.
Ser. June 9, 1949 D. U. Feb. 25, 1948

Pretty Package—51—B—559,889
Harriet Hubbard Ayer Inc., N. Y., N. Y.
Ser. Aug. 10, 1949 D. U. Feb. 25, 1948

Prozoin—18—CH—569,660
J. A. Wyman DBA Lazoin Co., Arlington, Va.
Ser. Nov. 30, 1948 D. U. Oct. 1, 1948

Rendex—51—H—570,228
Rendex Co., Denver, Colo.
Ser. Dec. 8, 1948 D. U. Aug. 1, 1948

Scan—IV—M—565,906
S. V. Cain Inc., Peoria, Ill.
Ser. Sept. 27, 1948 D. U. Jan. 8, 1947

Signature Carrere—51—BC—505,042
Maurice Bertrand Carrere, Paris, Fr.
Ser. Sept. 4, 1948 D. U. March 15, 1946

Colonia Silvestre—51—B—568,412
Victor, S.R.L. Milan, Italy
Ser. Nov. 8, 1948 D. U. Oct. 3, 1946

Song of Songs—51—B—532,982 (And Des.)
Marian Bialac, Inc., N. Y., N. Y.
Ser. Aug. 28, 1947 D. U. June 15, 1947

Swipe"—52—A—533,978
Beaver Home Products Co., Inc., Camden, N. J.
Ser. Sept. 10, 1947 D. U. June 25, 1947

Twice a Day—51—K—509,796
R. D. Spicer, DBA Reliance Labs., San Diego, Calif.
Ser. Aug. 23, 1948 D. U. Aug. 1, 1941

Valentine Compound—51—H—564,227
Valentine Labs., Inc., Chicago, Ill.
Ser. Aug. 26, 1948 D. U. Apr. 1, 1940

Vari-Form—40—H—522,859
Hyman & Hyman Beauty Products Inc., N. Y., N. Y.
Ser. Jan. 14, 1950 D. U. November 1946

Verdol—52—M—550,430
John Paterson & Co., Ltd., Glasgow, Scotland
Ser. Feb. 24, 1948 D. U. April 25, 1940

Vodibase—18—C—571,512
B. Clayton, DBA Vodine Co., Pasadena, Calif.
Ser. Jan. 3, 1949 D. U. Nov. 18, 1948

Wildroot Cocoanut Oil Shampoo—52—H—584,222 (And des.)
Wildroot Co., Inc., Buffalo, N. Y.
Ser. Jan. 27, 1949 D. U. Aug. 1, 1939

Act of 1946

The following Trade-Marks have been recently republished under the terms of the above (Lanham Act). No opposition can be filed against them but they are all subject to cancellation proceedings.

Amou-Daria—51—CH—328,822
Reg. Oct. 8, 1935 To Parfums Revillon, Parks, France
Repub. by registrant

Carnet de Bal—51—BCEK—356,391
Reg. Apr. 26, 1938 to Parfums Revillon, Paris, France
Repub. by registrant

Egoiste—51—B—359,201
Reg. Aug. 9, 1938 to Parfums Revillon, Paris, France
Repub. by registrant

Gobs-O-Suds—52—A—431,416
Reg. July 22, 1947 to Chemical Mfg. & Dist. Co., Easton, Pa.
Repub. by registrant

Latitude—51—CH—328,823
Reg. Oct. 8, 1935 to Parfums Revillon, Paris, France
Repub. by registrant

Parfums Revillon—51—CH—344,510 (And Des.)
Reg. Mar. 30, 1937 to Parfums Revillon, Paris France
Repub. by registrant

SBS—11—52—A—401,044
Reg. Apr. 20, 1943 to Sugar Beet Products Co., Inc., Saginaw, Mich.
Repub. by registrant

Silk-Top—51—H—425,660
Reg. Nov. 26, 1946 to Valmor Products Co., Chicago, Ill.
Repub. by registrant

Target—52—A—422,317
Reg. July 16, 1946 to Chemical Mfg. & Dist. Co., Easton, Pa.
Repub. by registrant

Tornade—51—CH—328,824
Reg. Oct. 8, 1935 to Parfums Revillon, Paris, France
Repub. by registrant

Viceroy—23—R—372,945
Reg. Nov. 21, 1939 to Rolls Razor, Inc., N. Y., N. Y.
Repub. by registrant

White House—52—A—308,456 (And Des.)
Reg. Dec. 5, 1933 to Iowa Soap Co., Burlington, Iowa
Repub. by registrant

READERS' QUESTIONS

HAIR POMADE: I am looking for a formula for making a hair dressing that will cause the hair to cling and have the necessary properties to make it lie neat. Florence.

A more clinging hair dressing, or pomade, such as you require can probably be made along the following lines:

White paraffin	**15.0**
Spermaceti	**4.0**
Stearic acid	**10.0**
Light mineral oil	**70.0**
Perfume	**1.0**

Melt the waxes and fats and heat the oils separately; then mix the two together thoroughly at the same temperature so that the waxes do not crystallize. Perfume at about 45°C.

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Lusteroid vials and tubes come in standard diameters from ¼" to 1½" and lengths up to 6". Specials, too. Cork, slip-on and screw cap closures.

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LUSTEROID CONTAINER COMPANY, INC.

10 West Parker Avenue, Maplewood, New Jersey

You Think It's Easy!

(*Continued from page 539*)

Streptomycin, for instance, has gratifyingly low acute toxicity, but its chronic toxicity, involving the possibility of damage to the eighth nerve, is a somewhat limiting factor to its usefulness.

Another question to be answered is whether susceptible bacteria will develop resistance to the antibiotic. The tuberle bacillus, it has been found, develops a resistance to streptomycin so promptly that the drug is frequently ineffective after six to ten weeks of use.

Before clinical trials can begin, the pharmacists must decide on stable and suitable dosage forms. A product is not of much value unless it can be compounded so that it has reasonable shelf life—nine months being an absolute minimum.

Clinical research is the final hurdle. Complete reports must be obtained from investigating physicians to document a formal application, which in turn must be approved by the Food and Drug Administration. Once the F. D. A. permit has been received, the antibiotic is ready to be launched. Then come large-scale manufacture, packaging and distribution, all of which have their special problems.

Antibiotic research has been likened to playing a slot machine, with each new antibiotic representing a coin. Any one of them may hit the jackpot, but the usual reward is a lemon. If a research organization is lucky, it will hit the jackpot early; if it is not lucky but persistent, it has a good chance of cashing in eventually. But lucky or persistent, it's a question of finding the right mold spore in the sample of soil, or having it float in through the window as Fleming's *Penicillium* did.

Ampoule Inspection

(*Continued from page 518*)

of experience on the job which ranged from two and a half weeks to seven and a half years had no relationship with either accuracy or consistency of inspection. Age which varied from eighteen to forty-one years had no relationship with accuracy of inspection, but age did have a slight tendency to relate positively to consistency. The older women were slightly more consistent in their judgments. The relationship between the time of day when the inspection was made and accuracy, consistency, or speed of inspection was zero. Also the day of week of the inspection had no relationship to quality or quantity of inspection.

There was a trend for the more accurate employee to inspect more slowly than the less accurate within the time variations found in this study, but consistency of judgment was affected little by the rapidity of making the judgments. A high number of ampoules rejected indicates a high severity standard. This high severity standard causes, of course, more judgments to reject, but a low severity standard on the part of the inspector requires her to reject only those ampoules which are clearly unacceptable and to pass all the others. Such

kind of inspection can be done quite rapidly. However, if the severity standard of the inspector is relatively high, she must not only be careful in her perception, but also more discriminating in her judgments, and this takes more time.

There was a slight positive relationship between accuracy in rejecting "bad" ampoules and the accuracy in passing "good" ampoules. This means that employees selected on their performance of accuracy in rejecting "bad" ampoules will also tend to be more accurate in passing "good" ampoules. The girls in this study did not differ much from each other in the number of "good" ampoules rejected. If their performance varied as much in rejecting "good" ampoules as it did in passing "bad" ampoules the relationship between these two aspects of this performance would be much higher.

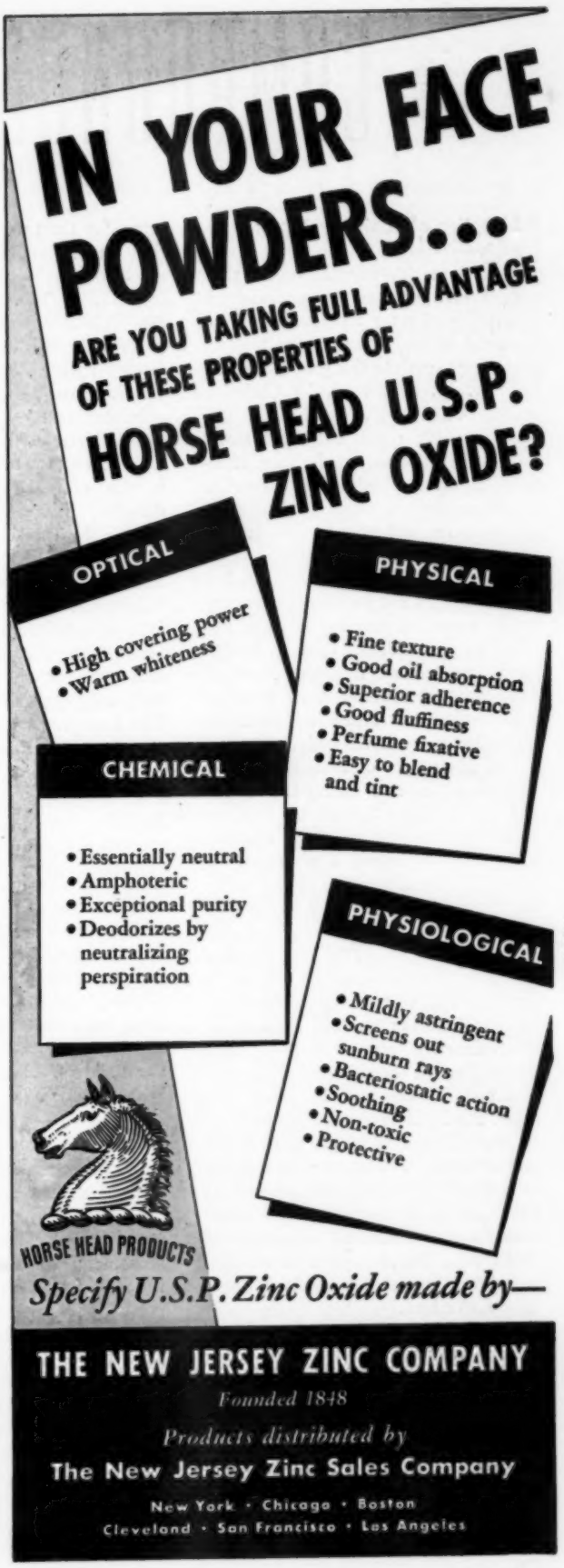
The difference in inspection accuracy between the more accurate and the less accurate girls was largely due to just a few rejectable ampoules. The ampoules which were definitely rejectable were rejected 100 per cent by both of these groups, but a few other ampoules (4 per cent of the total sample inspected) were rejected only 40 per cent to 80 per cent of the time by the less accurate group and well over 90 per cent by the more accurate. With such a ratio, defective ampoules of this kind not only provide a basis for differentiating between good and poor inspectors but also indicate that training should be concentrated on ampoules with these particular types of defects.

Rejection of "good" ampoules was about one-half per cent of all "good" ampoules inspected. The more accurate and less accurate girls were about equal in the percentage of "good" ampoules they rejected. The clearly substandard ampoule presents no problem because all the girls reject them, but those ampoules with certain types of defects are passed too often by the less accurate group. Training of both good and poor inspectors on ampoules with such types of defects will increase the general level of inspection accuracy. The effectiveness of such training should be measured with representative set of test ampoules.

Our study showed five sources of error which are listed in order of importance:

1.	Judgment	Deciding whether or not the ampoule is acceptable.
2.	Sensory	Adequate near point visual acuity and related visual charactristics.
3.	Perceptual	Making a meaningful perception of what is seen.
4.	Motor	Misplacing an ampoule.
5.	Mechanical	Foreign matter so situated that it is not seen.

The maintenance of the minimum visual standard for ampoule inspector will eliminate the sensory source of error and reduce the perceptual source of error. Training will reduce errors due to judgment. The relatively rare motor and mechanical errors might be reduced by a revised motion pattern in the handling of the ampoules by the inspectors.



COMPOUNDER'S CORNER

Absorption of Topically Applied Radioactive Iodide

Despite much study, there still exists considerable controversy concerning the absorption of some medicaments from ointment bases. In discussing the up-to-date approach to this problem, G. N. Cyr, D. M. Skauen, J. E. Christian and C. O. Lee (*J. A. Ph. A.* Scient. Ed. 38:615, 1949) point out that many radioactive isotopes can be used effectively for labeling and tracing the stable, nonradioactive isotopes. Biological processes are not able to differentiate between the common, stable isotopes and those that are radioactive. Radioactive isotopes can be detected at very much lower concentrations than the common, stable ones. Using a labeled compound, minute traces of it which have been absorbed can be detected even though the stable compound is normally present in the body.

The advantages of using radioactive isotopes as tracers in testing the absorption of substances through the skin has been demonstrated by these workers. They have developed a technique for measuring the absorption of the iodide ion from ointment bases by tracer methods. The method developed applies to absorption through the skin of albino rats but the conclusions do not necessarily indicate that similar results would occur with the human skin. The amount of radioactive sodium iodide which passes through the skin and which was absorbed by the thyroid gland was small. The highest penetration amounted to approximately 0.05 per cent of the amount applied. Maximum absorption of the radioactive sodium iodide from lard took place in about thirty hours under the experimental conditions of this study. Its absorption from white petrolatum was greater than from either wool fat or lard.

Cream Shampoos

Properly formulated cream or paste shampoos, says S. P. Jannaway (*Alchimist* 3:207, 1949) can serve as efficient hair and scalp cleaners without exhibiting such defects as lime soap formation, excessive degreasing action and poor lathering properties. The paste or emulsion medium provides ample scope for the use of modern synthetic detergents, dermatologically acceptable emollients, and a variety of other special ingredients. The chief feature of these new-style shampoos is their small but significant content of emollient or superfatting agents designed to offset the drastic grease-removing effect of alkyl sulphates and other synthetic detergents. Even so, the proportion of such additions must still be strictly limited, in view of the fact that they possess definite foam-reducing properties. Among the emollients suggested for use are lanolin and its derivatives, lecithin, unsaturated fatty acids, fatty alcohols, "Carbowaxes" and derivatives, glyceryl stearate and ricinoleate, diglycol laurate, and products of a generally similar character. Stearic acid and soaps are frequently included to ensure opacity. The basic constituents are, of course, the various sulphated fatty alcohol pastes available on the market.

Without attempting to give a detailed formula, this authority suggests that the following may serve as a basis for experiment for making cream type shampoos:

Sodium alkyl sulphate paste	**54**
Stearic acid	**10**
Triethanolamine stearate	**12**
Glyceryl monostearate	**3**
Diglycol laurate	**2**
Borax	**7**
Perfume oil	**sufficient**
Water, to make	**100**

Bromo Acid Solvents for Lipsticks

In *Schimmel Briefs* for February, 1950 it is pointed out that despite its reputation as a bromo acid solvent, the amount of the dye which castor oil will dissolve is actually rather small, in fact usually not more than 0.5 per cent. The larger portion of the bromo acid in a lipstick is not in solution but is simply dispersed throughout the base. Therefore, the cosmetic industry has been on the alert for some time to find materials compatible with the waxes and oils of the lipstick base which are better solvents for bromo acid than is castor oil. Many solvents are disqualified for use in lipsticks because of too high volatility, disagreeable odor or toxicity.

Butyl stearate is one bromo acid solvent which has been used to some extent but experience has shown that lipsticks containing this ester tend to sweat due to separation of the solvent from the rest of the lipstick base. Various derivatives of glycerine and the glycols containing one or more free hydroxyl groups are active solvents for bromo acid. Examples of such derivatives are glyceryl monostearate, diethylene glycol monostearate and glyceryl monolaurate. Lipstick formulas incorporating some of these materials have to be adjusted to compensate for the low viscosity in comparison to that of castor oil.

It is noted that tetrahydrofurfuryl alcohol is capable of dissolving over 20 per cent of its weight of bromo acid. The use of esters of this alcohol as bromo acid solvents has been patented recently in England (Brit. pat. 629,102). Tetrahydrofurfuryl acetate is said to dissolve over 28 per cent of bromo acid. While it is miscible with water in all proportions, it is also compatible with most of the oils and waxes used in lipstick bases and serves as a plasticizer for the composition, making the lipstick more durable. The use of this material is illustrated in the following formula for making a lipstick:

White beeswax	**40.0**
Tetrahydrofurfuryl acetate	**30.0**
Cocoa butter	**20.0**
Lanolin	**5.0**
Bromo acid	**2.0**
p-Hydroxybenzoic acid	**0.1**
Red cosmetic lakes	**sufficient**
Perfume	**sufficient**

The fatty acid esters of tetrahydrofurfuryl alcohol such as the stearate and ricinoleate are also mentioned as bromo acid solvents in the patent.

T. G. A. Standard for CMC

The Toilet Goods Association Standard for sodium carboxymethylcellulose, commonly known as CMC, was issued on March 15, 1950 as T.G.A. Specification No. 34. This describes sodium carboxymethylcellulose (sodium cellulose glycolate) as a white, hygroscopic, odorless and tasteless powder having the empirical formula $R(OCH_2\ COONa)\ n$

where R represents the cellulose structure. The specification includes standards of solubility, moisture, viscosity and content of CMC, chlorides, copper, iron, lead and arsenic. Details are provided for tests to determine chlorides, copper, iron and CMC in sodium carboxymethyl cellulose.

Synthetic Coal Tar Solution

Ordinary solution of coal tar has a number of drawbacks and workers have made a number of suggestions for improving the characteristics of this widely used dermatological preparation. The latest modification is the following synthetic coal solution, as devised by T. Butterworth, T. A. Manzelli and V. E. Brumbaugh (*Arch. Dermat. & Syph.* 61:678, 1950):

	Gm. or Cc.
Anthracene	2.2
Naphthalene	21.8
Phenanthrene	8.0
Carbazole	4.6
Picolene	1.16
Pyridine	1.16
Quinolene	1.16
Phenol	1.4
Cresol	1.5
Isopropyl alcohl 99%, a sufficient quantity to make	1,000.0

The phenanthrene is dissolved first in the alcohol, after which procedure the other ingredients may be added in any order. The result is a straw-colored solution which darkens with age.

They have used this synthetic coal tar solution where formerly solution of coal tar N.F. was employed. Most frequently, it has been prescribed in a scalp lotion for seborrhea. The following formula, which produces a practically water-colored preparation, has been used with satisfaction:

	Gm. or Cc.
Synthetic coal tar solution	15.0
Salicylic acid	4.0
Spirit of camphor	20.0
Isopropyl alcohol 70%, a sufficient quantity to make	240.0

Synthetic coal tar solution has been used in lotions, in baths (60.0 to 90.0 cc. to a tub) and in full strength when it is applied to the scalp in psoriasis. It has also proved effective in treating palmar eczema when the preparation containing synthetic coal tar solution, 40.0 cc., and glycerine, 20.0 cc., is massaged in gently three or four times a day. These workers feel that the therapeutic efficiency of the synthetic coal tar solution approximates that of solution of coal tar N.F. From an esthetic viewpoint, it is definitely superior since it is less likely to discolor the hair.

Cold Season Preparations

Recent issues of bulletins from the Florida Formulary, as prepared by the Bureau of Professional Relations of the Florida College of Pharmacy, describe several preparations that are particularly suited to the care of colds and coughs. One of these is a Compound Cherry Cough Syrup F.F., made from:

Codeine phosphate	0.25 Gm.
Spirit chloroform	6.25 cc.
Potassium guaiacolsulfonate	2.00 Gm.
Ammonium chloride	2.00 Gm.
Antimony and potassium tartrate	0.02 Gm.
Syrup of cherry, to make	120.00 cc.

The dose is one teaspoonful as directed by the physician. It is noted that each fluidounce represents:

Codeine phosphate	1 gr.
Potassium guaiacolsulfonate	8 gr.
Ammonium chloride	8 gr.
Antimony and potassium tartrate	1/12 gr.

It is pointed out that Compound Cherry Cough Mixture, F.F., offers in a palatable and well tolerated combination effective expectorants useful in acute and subacute inflammatory conditions and bronchitis. Codeine phosphate has been added for its sedative action but in amounts to make it an exempt narcotic, with larger amounts left to the physician for individual cases.

Of related interest is a chest rub consisting of:

Gum camphor	6 parts
Methyl salicylate	6 "
Menthol	8 "
Oil of cajeput	10 "
Oil of eucalyptus	10 "
Turpentine	8 "
Paraffin	24 "
Petrolatum	250 "

Bulletin on Resorcinol

The Chemical Division of Koppers Company, Inc., has issued a new comprehensive 40-page technical bulletin describing the physical and chemical nature, the uses, and chemical reactions of resorcinol. An extensive revision and enlargement of a previous technical bulletin, the new bulletin describes the use of resorcinol to increase the adhesion between rubber and textiles and in the preparation of dyestuffs, explosives and pharmaceuticals. The chemical's use in the preparation of cosmetics, fur dyes and treatments, paints and varnishes, plastics stabilizers and plasticizers, synthetic resin adhesives, tanning agents, thermosetting plastics, and as an analytical reagent or as an antioxidant also are discussed. Technical information in the bulletin includes physical properties, crystallographic, spectral, and thermodynamic data, as well as data on the chemical's solubility in common liquids. The bulletin offers commercial information on resorcinol pertaining to grades available, containers, and handling and storage. A short discussion of the toxicology of Resorcinol also has been included. Completing the new technical bulletin on Resorcinol is an 11-page bibliography of technical, patent, and general references. Copies of the bulletin may be obtained by requesting Technical Bulletin C-9-124 from Koppers Company, Inc., Chemical Division, Pittsburgh 19, Pa.

Cyclohexyl Pyroborate

A versatile new veterinary medicinal cream that kills germs and fungi, stops insect bites from itching, feeds drugs into the bloodstream, promotes the healing of wounds, and deodorizes was announced at the 117th national meeting of the American Chemical Society, April 11, 1950, by M. M. Clark and A. R. Clark. This interesting substance, cyclohexyl pyroborate, forms a cream when mixed with water in the proper proportions. This cream rubs into the skin without forming a greasy film or jelly that would mat the fur of animals. Because it combines equally well with water-soluble or organic materials, cyclohexyl pyroborate can be mixed with almost any kind of drug for prescription use. They stated that the cream penetrates greases and oils on the skin as well as the serous fluids in infection. The cream does no clog pores or moisture passage and allows ventilation of the skin. When applied, cyclohexyl pyroborate melts because of moisture and rubbing and forms a fluffy dry powder which is adherent but can be easily washed off with cold water. In tests, the product has killed *staphylococcus aureus* within four minutes and has proved to be non-toxic when applied to other than mucous-coated areas.

Advertising Pharmaceuticals

(Continued from page 529)

3. The Promotion is Pre-Tested

You have all seen those articles in advertising trade journals where two case histories of advertisements "A" and "B" are given. You are encouraged to guess which ad outpulled the other. I don't know what your own personal experience has been in guessing which was the better advertisement, but Nielsen has a comment to make that seems pertinent. He says that "the average executives are right, or substantially right, only 58 per cent of the time in their judgements on marketing questions." One of the common marketing errors is "the failure to gauge correctly the relative values of various sales and advertising appeals." For instance, highly scientific copy that might appeal greatly to research specialists on your staff may be too technical and professorial to hold the interest of a busy general practitioner.

Therefore a number of calls on physicians may be necessary to help you decide on the basic sales idea of a campaign, for what seems to be an important product preference feature to you or your people, may be of considerably lesser importance to the physicians who are to use the product. As Hardt points out, "The time to correct sales weaknesses is before the product is introduced, because if they appear after it is on the market the psychological effect on both seller and user is serious; in fact, no matter how speedily the correction is made, the damage to sales is often very substantial."

If time permits, by all means pre-test the plan. Test all of it or a part of it in a large area or in one trading area. Conduct a split mailing with return cards and/or follow-up survey. Develop your own physician and pharmacist panels. But whenever you can and whenever the size of the promotion warrants it, *pre-test* to confirm your judgement.

4. Split-Second Timing

The war-born expression of "too little, too late" can apply to the introduction of new products as well as to the battlefield.

When a new product is launched, all phases of the advertising program should be complete. Electrotypes should be ready to meet journal advertising schedules. Ample stocks of folders, blotters, reprints, detailing portfolios, and other literature should be available for the representative staff and special direct mail materials should be ready to meet mailing dates.

The entire representative staff should know exactly what to do, how, when and why to do it. The program should be completed for rapid coverage of all distribution channels and plans for regular and rapid follow-up should be finished down to the last detail. The importance of assuring adequate distribution is obvious but the rapidity with which this is accomplished will effect the timing of the entire promotion. It may well

fine perfume bases

Albert Albek, Inc.

3573 HAYDEN AVENUE, CULVER CITY, CALIFORNIA

NUNCA VANA ALBEK

be that without this high speed coverage of distribution much of the promotional "fire power" will be wasted in forcing distribution rather than in creating sales. The distribution of every new product should be a race against time, if for no other reason than to make your promotional dollar more effective.

Production will have on hand ample stocks of all sizes of trade packages and samples with access to a reserve of raw materials and packing materials to keep up with the sales budget even if an unprecedented success throws an unexpected burden on production facilities.

All of this is no small order, and involves coordination to such a fine degree that "D-day" finds all divisions in the organization ready.

5. They "Overwhelm" The Physicians

The major ingredient of every successful new product advertising campaign is what I like to call "overwhelming" the physician. This point has been made a number of different ways but remains, probably, the number one reason why so many good products fail.

McAdams has made this point by suggesting that manufacturers "back the men with man-sized campaigns."

Jordan has pointed out that "the problem in marketing is one of penetration . . ."

Listen to what Haberman says has to happen before a new product can be considered as successfully introduced:

1. The doctor must *hear* the name of the new product.
2. He must *know* what he is going to use it for.
3. He must be *convinced* of its clinical effectiveness.
4. He must *try* it for the first time.
5. He must *use* it routinely.
6. After a while he must find *additional* clinical uses so that he can prescribe more of the product, more often.

There are only six steps . . . but many new products never get beyond the first step with the majority of physicians . . . "The doctor must *hear* the name of the new product."

With a list of around 113,000 physicians under 65 on the Fisher Stevens list, it would take a field staff of over 300 men to call on these doctors four times a year. This staff has a number of products to detail so the chances are a new product gets detailed only once or perhaps twice during the year. Even if all of us had a staff this large, that's a long way from "overwhelming" the physician.

What to do? It's no easy problem with a limited budget but it must be done if the new product is to succeed.

Here a few suggestions that will help you plan a more profitable new product promotion:

1. Make a larger promotional budget available by giving the new product a temporary "free ride" on expenses already carried by old products e.g. overhead,

(*Continued on page 582*)

ATALCO

Cetyl alcohol

cast or flakes

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Am. ALCOLAC Corp.

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New York 21, N. Y.

REgent 7-8228, 7-8145

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Creams	☐	Emulsions	☐
Lotions	☐	Ointments	☐
Lipsticks	☐	Tablet coating	☐
Rouge	☐	Textiles	
Soaps		Finishing agent	☐
Superfatted soaps	☐	Softeners	☐

ADVANCING THERAPY

Chloromycetin in Infections

An indicative report on the clinical use of "Chloromycitia" (chloramphenicol) in the treatment of infections has been presented by W. L. Hewitt and B. Williams, Jr. (*New England J. Med.* 242:119, 1950). They note that Chloromycetin has a wide range of *in vitro* bacteriostatic activity for pathogenic gram-positive cocci and gram-negative bacilli. *Pseudomonas aeruginosa* and, to a somewhat less extent, *Proteus vulgaris* present the most notable resistance. Develpment of drug resistance during treatment has not been observed. A single dose of 1 Gm. was required to obtain with dependability a serum concentration of 10 gamma per cubic centimeter. Considerable variation in serum concentrations was observed with such prominent peaks as are characteristic of serum penicillin concentrations after administration parenterally of aqueous mixtures. Only a small fraction of the active antibacterial material administered can be recovered from the urine, owing to the formation of inactive degradation products.

Clinical improvement was noted in 75 per cent of patients with urinary-tract infections and urinary sterilization in 69 per cent. Bacteriologic relapses occurred in 25 per cent of these patients. These results are comparable with those obtained with sulfadiazine or streptomycin and are influenced largely by the same factors as determine cure with the latter agents. The following features militate against favorable results: mixed infections, infections with *Ps. aeruginosa* (and, to a lesser extent, *P. vulgaris*), obstruction to the free flow of urine, foreign bodies in the urinary tract, undrained collection of exudate and wounds with granulating surfaces.

Chloromycetin may be effective in primary atypical pneumonia. No cases of progression of the disease were noted after chemotherapy was instituted. Favorable results were observed from treatment of a small number of moderately severe cases of acute bacterial pneumonia due to the pneumococcus and beta-hemolytic streptococcus. Acute exacerbations of chronic pulmonary infections due to gram-positive cocci and gram-negative bacilli responded well. Chemotherapy had no effect on the underlying pathologic process responsible for chronic pulmonary infection and was usually followed by the appearance of resistant bacteria such as *Ps. aeruginosa*, *P. vulgaris* and *Monilia albicans*.

The treatment of a small number of patients with herpes zoster did not suggest that Chloromycetin influenced favorably the course of this disease. No marked beneficial effect occurred in any of five patients with chronic ulcerative colitis treated with this agent.

Untoward side effects primarily concern the gastronintestinal tract and are relatively minor in most cases. The frequency is related to daily dosage, occurring in 8 per cent of patients receiving a daily dose of 2 Gm. and in 48 per cent of those receiving 6 Gm. daily.

Drug Absorption Through Skin

Further work on the permeability of the skin to medicaments has been done by F. Ducammon (*Pharm. Act. Helv.* 25:1, 1950, through *Pharm. J.* 164:136, 1950). Thus, be has made a study of the absorption of potassium iodide in twelve different bases. These included peanut oil, acid and alkaline bases, emulsions, bentonite, sodium alginate and alcohol. When an irritant such as essential oil of mustard was included in the formula, and friction applied, elimination in the urine in 16 hours totalled up to 12.2 per cent of the quantity applied; but without the irritant results were negative. After oral administration of 0.1 Gm. of potassium iodide, the amount of iodine eliminated varied from 20 to 81 per cent. He concludes that healthy skin is impermeable to potassium iodide.

He also studied the absorption and elimination of salicylic acid from ointments. The bases used were: (1) water-in-oil (including soft petrolatum, lanolin, cold cream, and pure lard; and (2) oil-in-water (including bentonite, stearate, "Carbowax" 1540 and emulsifying ointment B.P. It was shown that, after oral administration of 0.5 Gm. of salicylic acid up to 73 per cent was eliminated in the urine. The local applications tested contained 10 per cent of salicylic acid. The choice of base considerably influenced the penetration of salicylic acid; the quantities absorbed ranged from 7 to 31 per cent. Of the fatty bases tested, lard was found to be better than soft petrolatum or lanolin. Best results were given by oil-in-water preparations, such as those prepared with bentonite or emulsifying ointment of the British Pharmacopoeia.

Antihistamine for Varicose Ulcers

In their report in the *Michigan State Medical Society Journal* (48:1275, 1950), L. Green and A. A. Klein express the opinion that allergy plays an important part in the development of varicose ulcer. They cite the case of a patient who had a large varicose ulcer and severe dermatitis medicamentosa surrounding the ulcer. The ulcer had been present for two months and had been treated with many types of local applications. She was given tripelennamine hydrochloride ("Pyribenzamine") in doses of 50 mg. four times daily and advised to discontinue all local treatment. Pain and dermatitis disappeared rapidly, and at the end of five weeks the ulcer was completely cured. More than a year later there had been no recurrence. The same treatment was used in nine other cases, and cure was obtained in seven patients, while two are still under treatment. Tripelennamine hydrochloride was given in doses of 200 to 500 mg. daily. The physicians feel that the method of treatment is so simple that it should at least be given a trial before or with other treatment.

New Preparation for Acne

A proper cosmetic preparation, says S. J. Fanburg (*J. Med. Soc. New Jersey* 47:19, 1950) facilitates the early, active treatment of acne vulgaris. He has found that an excellent aid in topical treatment is a preparation which incorporates resorcin and sulfur in the form of a cosmetic base. This is applied to the skin in the daytime. It has exceptional covering properties and the medications act over a long period of time. It is a great boost to the morale of the acne vulgaris patient, as the lesions can be almost completely hidden. The product consists of a number of

ingredients blended to produce a flesh-colored cake, and is put up in the form of an easily carried compact. The formula contains:

Isopropyl stearate	32 per cent
Lecithin	1 " "
Lanolin	3 " "
Cetyl alcohol	2 " "
Titanium dioxide	42 " "
Kaolin	6 " "
Ceresin	4 " "
Resorcin	2 " "
Sulfur	8 " "

Fanburg has treated a series of 35 patients with this preparation with satisfactory results. The product is available commercially and a non-medicated cake, useful for its psychological effect, is also provided.

Oral Bismuth Therapy in Dermatoses

Sodium bismuth triglycollamate appears to be of definite value in the treatment of inflammatory dermatoses, according to the observations made by J. K. Howles (*New Orleans* Med. & Surg. J. 102:190, 1949). He states that sodium bismuth triglycollamate is 1 mole of a bismuthyl salt of triglycollamic acid combined with 3 moles of disodium triglycollamate to form a double saltlike structure. The original clinical investigation with this drug was conducted to determine the value of the oral form of bismuth in the treatment of all stages of syphilis. In the course of the investigation, certain nonspecific, inflammatory dermatoses were accidentally included in the scope of the investigative work to determine the response of these dermatoses to sodium bismuth triglycollamate. The cases in which this drug was used included 69 of verruca, 69 of lupus erythematosus, 56 of vitiligo, 39 of lichen planus, 11 of sarcoidosis, 9 each of granuloma annulare and plantar warts, 6 of morphea and 5 of scleroderma. On the basis of the results obtained in these cases Howles concludes that sodium bismuth triglycollamate has great value in treating certain inflammatory dermatoses and in some dermatoses not accompanied with an inflammatory reaction, when given in dosages of 3 to 6 tablets daily, preferably after meals. Each tablet contained the equivalent of 75 mg. of metallic bismuth. The drug seems to be an excellent adjunct to the dermatologic armamentarium, particularly when used as an auxiliary or supplementary measure. The relatively low toxicity of the drug, the excellent tolerance to it, the ease of administration, the infrequency of even mild complications and the proved balance of the rate of absorption and excretion seem to justify its use in the types of dermatoses mentioned in this survey.

Chloromycetin for Enteritis

S. Ross and his associates (*New England J. Med.* 242:173, 1950) point out that salmonella infections have shown a singular refractoriness to chemotherapeutic and antibiotic agents. Because of the disappointing results thus far with all previous therapy, it was deemed of considerable interest to treat a series of cases of salmonella enteritis with Chloromycetin. This was predicated on the ready susceptibility of the organism to this drug since the majority of strains of salmonella are inhibited by Chloromycetin in concentrations ranging from 2 to 5 microgm. per cubic centimeter. The successful use of Chloromycetin in typhoid fever gave added impetus to the belief that this antibiotic might similarly prove to be efficacious in salmonella infections in view of the close bacteriologic relation of the organisms.

Nine cases of salmonella enteritis in infants were treated with Chloromycetin. The Chloromycetin sensitivities of the various strains of salmonella isolated from these patients ranged from 2 to 5 microgm. per cubic centimeter. In spite of the ready susceptibility of the organism to the drug, only 2 of the 9 patients in this series became permanently free of the pathogen after treatment. In the other 7 cases, a transitory inhibitory effect on both the salmonella organism and the normal stool flora was observed. However, within five to forty days after Chloromycetin was discontinued, the pathogen reappeared in the stools. No increase in Chloromycetin resistance was observed in any case after bacteriologic relapse.

Gantrisin in Urinary Infections

The potentialities of the new drug, Gantrisin (3, 4-dimethyl-5-sulfanilamido-isoxazole) in the treatment of urinary infections is indicated in the report of G. Carroll, H. N. Allen and H. Flynn (*J. A. M. A.* 142:85, 1950). As part of their investigations, they studied the sensitivity of various organisms to this drug, both *in vitro* and *in vivo*. As a result of their findings, they feel that Gantrisin is the drug of choice in the treatment of urinary infections due to Proteus. It is effective in the treatment of urinary infections due to Escherichia coli, Alcaligenes and certain intermediate organisms. It is moderately effective in infections caused by Aerobacter and paracolon bacillus. Infections due to Pseudomonas and Streptococcus fecalis are resistant to treatment with Gantrisin. In 5 of 26 such cases the infection responded favorably. Gantrisin, when given in therapeutic doses (2 Gm. orally every six hours or the intravenous or intramuscular injection of the 40 per cent solution), does not produce any local or systemic toxic reactions. The concomitant use of alkali or forced fluids is not necessary.

Water Fluorination and Goiter

According to a note in *Modern Medicine* (18:96, March 1, 1950) the addition of fluorine to drinking water for the prevention of tooth decay may increase the incidence of goiter. D. G. Steyn has found such a trend in several regions of South Africa where fluorine is being added. The material, which has chemical properties similar to those of iodine, is attracted to the thyroid and acts to deprive the gland of iodine. This action is intensified by water with a high-calcium content. Goiters may be prevented in persons drinking such water by a greater intake of iodine.

Antibiotic Synergism in Dentistry

It has long been recognized that synergistic effects can be produced when two or more drugs are combined. For example, mercurial and arsenical compounds, when used in the treatment of syphilis, react more efficiently in combination than when used separately. In recent years, with the introduction of sulfonamide, it has been shown that a combination of two or three sulfonamides will enhance the bacteriostatic action of each drug and also reduce its toxicity.

With these facts in mind, J. B. Bender and S. Seltzer (*J. Am. Dent. Assoc.* 40:169, 1950) decided to study the effects of combining penicillin and streptomycin for the treatment of infected pulpless teeth. They found that under *in vitro* conditions, using a bactericidal technic, the action of penicillin was enhanced in the presence of streptomycin against *Staph. aureus* (209). There was no additive action against a certain strain of streptococcus. When the bacteria were mixed in equal amounts there was an antagonistic effect in the lower unitage. Hence they feel that streptomycin should be incorporated with penicillin to prevent the inactivation of penicillin by specifically eliminating the gram-negative organisms in mixed infections of the root canal. Synergism as well as specificity of action of penicillin and streptomycin can enhance clinical results in the treatment of the infected pulpless teeth.

Advertising Pharmaceuticals

(*Continued from page 579*)

selling and delivery expenses, administrative and general office expenses, research and development, etc.

2. Provide a larger promotional dollar budget for introducing new products and amortize this expense over a three year period.

3. Set aside a part of the profits each year in a fund called "Reserve for New Product Development and Promotion."

4. Limit the representative staff to territories that can be covered adequately concentrating on key physicians with a high prescription potential.

5. Restrict budget expenditures on "minor" products.

6. Use more of the less expensive materials such as self mailers and government post cards, and less of the expensive materials like samples and four color brochures.

7. Limit the area in which the new product is introduced.

6. Advertising Behind The Advertising

Clinical Paper

First there is the clinical paper that is presented at important local, state or national meetings and/or published in the medical press. If publication of some of these clinical papers can be timed to coincide with the new product introduction, so much the better. We are all in agreement, I am sure, on the great influence these papers have on the prescribing habits of fellow physicians. This is the evidence that forms the backbone of the most sales presentations. This phase of the promotional program is rarely overlooked but on the other hand is rarely given the support it deserves.

Opinion Influencing Group

Similar to the clinical paper is the placing of material for clinical trial with important physicians throughout the country. These physicians may never write a paper but they invariably become routine prescribers for the product and have great influence on the prescribing habits of others. These men might be called the "opinion influencing" group. Don't forget physicians like to talk "shop", too, and you will find your new product being detailed by some very capable and high-priced "detail men" at relatively low cost.

Teaching Institutions

Next, there is the support given to new products by having them discussed in the classrooms at Schools of Medicine and Pharmacy. The deans of these colleges and professors of medicine are constantly alert for new material to keep their students abreast of the times. Tremendous quantities of literature for teaching purposes have been used on a number of new products, such as vitamins, sulfa drugs, penicillin, and others of considerably lesser importance. Keep this avenue of

(*Continued on page 592*)

component parts

Limbs—torso—head blend into exceptional beauty; Imagination—skill—experience unite to create superior products.

It's finding the right combination that counts most in perfecting cosmetic products. For over 40 years, our meticulously-kept standards of service have given leading American private brand manufacturers the skill, imagination and merchandising know-how that have brought their products sales success.

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Imported Directly from Selected Producers

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Fine Essential & Floral Oils, Aromatic Chemicals
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STICK COLOGNE — Climbing to new peaks of popularity in these new STICK COLOGNE JARS by the

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All have 48 millimeter highly polished brass caps, tested air-tight and saran-film lined.

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PERFUMER'S SHELF

Quantitive Isolation of Vanillins

A method for the quantitative isolation of vanillins from natural products has been described by H. Bohnsack (*Z. Lebensm.— Untersuch. U. Forsch* 89: 162, 1949). Thus vanillin was isolated from a mixture of odoriferous substances (e.g. vanillin, para-cresol, cresol, geraniol and ether) by shaking the 100 Gm. sample for five hours in 100 cc. of a 1:1 water-diluted solution of technical bisulfite lye, extracting ten times with ether, acidifying the bisulfite solution with 50 per cent sulfuric acid, steam distilling the vanillin, and isolating it from the distillate with ethei. When the bisulfate solution used was first neutralized with sodium hydroxide, only 42.5 per cent of the vanillin was recovered. Another method, in which para-hydrazinobenzene-sulfonic acid was used to bind the vanillin in the aqueous solution, also gave a quantitative separation. Heliotropin did not form a complex with acid bisulfite lye.

Thymol from Ajowan Seeds

In *Current Science* (18:17, 1949), J. Verghese, K. C. Gulati and M. L. Joshi discuss the production of thymol from ajowan seeds. They report that ajowan oil containing 36 to 39 per cent of thymol is obtained from the seeds of the ptychotis ajowan (*Carium copticum*) by steam distillation. Seed from five different localities yielded from 2.9 to 4.2 per cent oil. It is noted that preliminary treatment of the seeds with allicali or salts lowers the yield of oil.

British Buchu Oil Standard

According to a note in *The Chemist and Druggist* (153:114, 1950) the drug buchu, official in the B.P., 1914, was omitted from the 1948 pharmacopoeia, presumably on the grounds that it had lost favor in therapeutics. Following a time-honored procedure, it was relegated to the B.P.C. and is included in the 1949 edition of that work. In the B.P., 1932, apart from limits for other organic matter and for stems, the only "test for purity" in the monograph for buchu was an ash content, but later an alcohol extractive test was added by the 1936 Addendum. The Codex, however, while leaving the test for stems unchanged (not more than 5 per cent) reduces the limit for other organic matter from 2 per cent to 1 per cent and introduces a requirement for volatile oil of not less than 2 per cent in the whole drug and not less than 1.5 per cent in powder. Several importers of buchu consider that the standard for oil content of the whole leaves is too high, maintaining that the average commercial sample contains about 1.5 her cent. In the Codex monograph the dried leaves of *Barosma betulina* are said to contain about 1.5 to 2.5 per cent of volatile oil. Other authorities put it at from 1.3 to 2 per cent or from 1.3 to 2.5 per cent.

Oil of Ylang Replacement

With good grades of oil ylang ylang virtually impossible to obtain today except in very nominal quantities, a condition due to political and economic conditions at the source, there is timeless significance in the recent announcement of Fritzsche Brothers, Inc., New York, to the effect that their laboratories have succeeded in devcloping a synthetic replacement for the natural ylang composed entirely of readily available constituents and, therefore, independent of imported raw materials. According to this announcement, the new product, which will be identified as Basicol Ylang Extra, duplicates very accurately not only the basic odor of the natural oil but its characteristic topnotes as well. It is unique in that it is entirely lacking the usual harsh chemical character of the synthetic; furthermore, the perfume is extremely lasting with little, if any, detectable change throughout its entire evaporation range. Its importance as a stretcher of existing stocks and even as a complete substitute for the genuine oil is in direct proportion to the value of ylang as a modifier of jasmin, violet, lily, lilac and general oriental blends.

Thym Pale Essence

In *Industrie de la Perfumerie* for December, 1949, J. Gattefosse and G. Igolen report on their examination of essence of thym pale or *Thymus pallidus* Cossen, which is a native of South Morocco. The oil possesses a powerful odor of an aromatic character with camphor and thymol predominating. The following characteristics were determined on a sample of the oil:

Specific gravity	**0.938**
Specific rotation	**–0.5°**
Index of refraction	**1,4957**
Ester value	**0.6**
Ester value, after formylation (cold)	**210**
Carbonyl value, cold	**11.2**
Carbonyl value, hot	**22.4**
Phenol content	**.37 per cent**

Masking Taste of Vitamin B Complex

From an inspection of a number of liquid proprietary preparations of vitamin B complex, L. B. Lathrop and R. W. Clark (*J. Am. Pharm. Assoc.* Pract. Ed. 11:90, 1950) report that it was apparent that an attempt had been made in a variety of ways to disguise the taste of the vitamins, and it was also evident that, for the most part, the disguising was not efficient. Still another observation made was that there was a wide difference in the concentrations of the vitamins in the different products, some of them containing very little of some of the vitamins.

To remedy the situation they started an investigation of the several factors involved. For the experimental work of this study it was decided to make up a liquid vitamin B complex preparation containing the maximum daily requirement in each 4 cc. of solution. The test solution used contained the following amounts of the components of the B complex in each 4 cc. of solution:

Thiamine hydrochloride	**1.8 mg.**
Riboflavin	**3.0 mg.**
Niacinamide	**18.0 mg.**
Pyridoxine hydrochloride	**1.5 mg.**
Calcium pantothenate	**10.0 mg.**

Since the viscosity of a substance is one of the altering factors in taste sensation, they decided to try the effect of corn syrup as a major ingredient of the base. The following solution was made up and found to yield a better tasting product:

Saccharin sodium	**1 Gm.**
Citric acid	**5 Gm.**
Corn syrup, *q. s.*	**1000 cc.**

Various extracts and flavor concentrates were tested with the corn syrup base formula with the vitamin B complex present. One of these was considerably better tasting than the others to the ten individuals asked to participate in testing them. This particular blend of flavors is given below, and is the amount used for 500 cc. of test solution:

Imitation apricot	**6 gtts.**
Imitation peach	**3 gtts.**
Imitation maple	**4 gtts.**

It is not claimed that this blend of flavors is the best one possible to mix with the test solution. It is recognized that blending of flavors is an art within itself and it will be left to others to change the formula by one drop here and another drop there. It was believed that by the use of corn syrup, saccharin, citric acid, and the listed blend of flavors, the taste of the vitamin B complex in daily requirement per teaspoonful concentration had been successfully masked. Some attention, in a general way, was given to the stability of the products but no claims are made as to the effects of the vehicles on the various components of the vitamin B complex. Research on stability of the finished products and the effect of storage upon them is needed before final conclusions can be reached.

Quality Control of Perfume Materials

In an indicative rather than detailed discussion, Y. R. Naves (*Soap Perf. & Cosmetics*) points out that it is of vital importance for the modern manufacturer of odorous materials to check his products not only as regards their intrinsic olfactory qualities or defects, but also as regards the qualities and defects they exhibit under normal conditions of use. He emphasizes the fact that in a very large number of cases a trained sense of smell is infinitely more sensitive to impurity than the most penetrating of the physical or chemical methods for testing purity which are generally resorted to. This discrepancy is indeed fairly considerable if it be considered that the analytical techniques in general use by the industry are rather rough and ready and are only de'icate to within a few thousandths, and sometimes more, of an impurity.

Naves notes that there are impurities which have no appreciable effect on the odor or the taste, whatever the conditions governing their use. It follows that the costly elimination of the last traces of these impurities need not be undertaken. There are others which are favorable to adverse effects. While it is often impossible to discover their nature, isolate and reproduce them and thus have them available for disposal, they must be guarded against—but in a given and controlled proportion.

This authority feels that the manufacturer should test his products olfactorily by the classical methods of application or by those based on confidence in the consumer. However, these olfactory requirements must be supplemented, by the analytical processes. The analyst should also take advantage of the new and delicate physical, chemical and biological tests that are now available. He mentions, as examples, the measurement of absorption in ultra-violet and in infra-red light, measurement of dielectric constants and various other phenomena.

Oil of Pectis Papossa

According to C. E. Bradley and A. J. Haagen-Smit (*Econ. Botany* 3:407, 1949), *Pectis papposa* or chinchweed is found native over large areas of the Southwest; yielding three tons of green weight per acre. Yields of 0.4 to 0.6 per cent of oil on the green plant basis were obtained by steam distillation. Constituents of the oil were identified as follows: 27 per cent of beta-pinene, 2 per cent of alpha-pinene, 47 per cent of cumaldehyde, 1 per cent of benzaldehyde, 12 per cent of carvone, and traces of esters and acids. There were no alcohols. It is noted that the percentage of cumaldehyde in *Pectis* oil is approximately the same as in cumin oil, and *Pectis* oil and caraway are unique in containing both cumaldehyde and carvone.

Solubilized Oils for Galenicals

"Solubilized oils" or soluble oils, says A. J. Monte-Bovi (*J. Am. Pharm. Assoc.*, Pract. Ed. 11:107, 1950), are generally understood to be essential or flavoring oils compounded with an emulsifier or solvent which allows the mixture to give an apparently clear solution in water. These clear "solutions," in the ordinary sense, may or may not be true solutions. Such solubilized oils are being widely used in industry wherever a nonalcoholic or low-alcoholic highly flavored or perfumed preparation is desired. With this thought in mind a series of experiments was conducted with a view of determining the possible use of such solubilized oils in the preparation of those galenicals which present manufacturing difficulties involving long or difficult filtrations. Attention was first focused on Aromatic Elixir of the U.S.P. and then on Peppermint Water, with studies on other galenicals to follow.

It became apparent quite early that the method used in preparing the solubilized oils was of great importance and that many factors had to be considered. Thus the following formula and procedure proved best for making an aromatic elixir that, except for the use of a solubilizing agent, is essentially the same as the official preparation:

Orange oil, U.S.P.	**2.40 cc.**
Lemon oil, U.S.P.	**0.60 cc.**
Coriander oil, U.S.P.	**0.24 cc.**
Anise oil, U.S.P.	**0.06 cc.**
Polyoxyethylene sorbitan monolaurate (tween 20)	**19.00 cc.**
Syrup, U.S.P.	**375.00 cc.**
Alcohol, U.S.P.	
Distilled water, of each, a sufficient quantity, to make	**1000.00 cc.**

Thoroughly mix the oils with the polyoxyethylene sorbitan monolaurate and slowly add, with constant stirring, enough alcohol to make 250 cc. Pour this alcoholic solution into 350 cc. of the water, slowly and with gentle but constant stirring. Next add the syrup in small portions, slowly mixing after each addition. Allow to stand for a few minutes and then add enough water to make 1000 cc. No filtration is necessary since a clear solution results which compares favorably in odor, taste, and clarity with the official elixir.

The modified peppermint water was made as follows:

Oil of Peppermint, U.S.P.	**2.00 cc.**
Polyoxyethylene sorbitan monolaurate (tween 20)	**11.50 cc.**
Distilled water, to make	**1000.00 cc.**

Dissolve the peppermint oil in the polyoxyethylene sorbitan monolaurate and slowly add this solution to about 800 cc. of the water, mixing slowly and continuously. Allow to stand for a few minutes and then add water to make 1000 cc. No filtration is necessary since a clear solution results which compares favorably in clarity with the official peppermint water. The odor and taste of the water made with the solubilized oil appears to be more "minty" than the official water, suggesting the use of less solubilized oil in such a preparation.

When kept at room temperature over a period of six months, neither the elixir or the peppermint water showed any apparent change in clarity or taste.

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ABREAST OF THE MARKETS

ESSENTIAL OILS LEVELING OFF, BOTANICAL SUPPLY HINDERED BY HARVESTING CONDITIONS; COD LIVER OIL PRICE MAY FALL

A firm tone pervades the essential oil market at the present time, with prices tending to level off gradually, following their rapid climb during the past several months. Botanicals, on the other hand, continue to exhibit little activity, while several medicinals bear watching. Cod liver oil prices may possibly be reduced in Norway, according to one source, in order to meet competing conditions; glycerine production has mounted since the turn of the year and is closely paralleling the demand. The situation in lanolin is in a delicate balance, with reports of several wool-scouring plants having shut down. Lanolin production has not been affected yet, and there is no indication at the present time that any abrupt change will take place. Menthol continues to be perplexing, with shipments arriving from China, but few offers from the Brazilian area, apparently because of small crop conditions.

The unseasonably cold weather of last month has tended to discourage much buying of citrus oils, according to the trade, although it is expected these items will become more active with the anticipated milder temperatures of this month.

A reliable source has offered the unique supply picture of European items as one of the chief factors in the current sluggishness of the botanical market. Marginal labor—that category of workers which harvests herbs on a part-time basis and drifts to other types of work in off-season periods—has been dwindling in Europe since the war, especially in those areas east of the Iron Curtain. This condition exists in each of those countries in which labor is controlled by the government and is jockeyed around from one job to another, depending on what type of occupation is deemed most important at the moment. Although the harvesting of herbs may be of utmost importance to importers in America, it may also be considered the least useful task by the individual European government, alongside such activities as construction or employment in munitions factories.

Added to the marginal-labor problem is the prohibitive expense of cablegrams coupled with censorship restrictions which confront exporters only too frequently. Instead of cabling frequently to American importers, European sources, it is said, wait for a month or longer before notifying them of additions to, or depletions from, crops.

A recent example, cited by one dealer, concerns the botanical, uva ursa, indigenous to the Mediterranean area. This importer received word by cable that a sizable order could be filled within a few weeks, and proceeded to notify his customer. Several months have already passed since receipt of that cable from Europe, and the order is still awaiting fullfilment. The uva ursa crop is large, but the exporter in Europe has no labor force with which to harvest it and must await government permission before obtaining any marginal labor.

All this delay and red tape has necessarily discouraged American importers who can no longer put much reliance in month-old cables or depend on botanical deliveries from Europe even though they know there is a good crop in the ground.

Ylang Ylang Becoming Scarce

Ylang ylang oil is becoming progressively more difficult to procure because of world conditions, a phenomenon recently stressed by the introduction of a synthetic oil on the market. Most houses quote prices ranging from $8.25 to $11.50, although one source has a limited supply of ylang extra, selling at $15, a top grade which is very scarce.

Total imports of the oil in 1949 amounted to 32,297 pounds, valued at $189 803. It is interesting to note that this quantity is a trifle more than one third of the 72,717 pounds ($92,767) imported to this country in 1939. In more recent years, 1944, for example, ylang imports amounted to 40,132 pounds, valued at $233,073; in 1945, 85,796 pounds, at $507,907; in 1946, 56,139 pounds, at $384,889; in 1947, 35,967 pounds at $327,474; and in 1948, 32,499 pounds, at $157,883.

• Prices quoted in this section were current on the first of this month.

Benzoin Gum Up

Benzoin gum from Siam was available last month at $2.25, but some sources declared that this variety had excess ash and was less soluble than the average material. A better grade was quoted from $2.35 to $3.50.

Exports of gum benzoin from Thailand to the United States in 1949 were valued at US $18,985, compared with $19,591 in the preceding year. Thailand also shipped $20,729 worth of gum karaya to this country in 1949.

Cod Liver Oil Change Expected

Cod liver oil maintained a stable tone last month, with the price remaining between $1.40 and $1.50 a gallon for the U.S.P. oil. A decline is inticipated in some quarters, however, in the not-too-distant future, and hinges on the outcome of current discussions in Norway. The situation there, according to a source in the trade, has reached the point where refiners are unable to buy the crude oil at the government-controlled price without losing money.

Two factors may play an important part in influencing a downward revision of Norwegian cod liver oil prices. Iceland devalued the kroner for the second time in mid-March, producing a 40 per cent cut in the island's currency. This means that Iceland's cod liver oil is still selling at the same kroner value, but the dollar value is less than that of competing oils, and has created more competition for the Norweigian market. Another important factor which may influence Norwegian price adjustments is the advent of German fishing fleets which are now working to fill domestic orders. Because Germany uses a large quantity of cod liver oil, the fact that she has resorted to the use of her own ships will greatly affect the oil exports of Norway, Iceland, and England,

(*Continued on page 590*)

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BRAZILIAN MENTHOL OFFERINGS STILL SCANTY, SHIPMENTS FROM CHINA; VANILLA BEANS STEADY, GLYCERINE NORMAL

The menthol status has not cleared yet, according to spokesmen in the trade, who state that Brazil has made some price offers almost equal to the New York spot price. Shipments continue to enter the United States from China, in small lots, and are picked up immediately with spot prices being quoted anywheres from $10.25 to $10.40. The difficulty with the Chinese material lies in the fact that all exports must now originate from Tientsin instead of Shanghai, a condition which delays shipments for several weeks. Some sources believe the reticence on the part of the Brazilian exporters in failing to quote prices is due to the fact that their new crops are small; however, this is purely guesswork. The fact remains that the South American merchants are at showing no interest in prices offered by the Chinese and are making no effort to meet them on the open market, according to some sources.

The spot price for menthol in March ranged between $10.20 and $10.50, and while prices have advanced only slightly in the interim, it is the opinion of some that the figure will eventually be up to $10.40 on the inside price. Brazil is now quoting on June-July shipments, while China similarly hesitates to offer any material for shipment before the end of June, and even that is questionable owing to the political situation in that area.

The latest information available indicates that imports from Brazil to the United States in January, 1950 amounted to 3,537 pounds, as compared to virtually the same quantity a year ago of 3,924 pounds. Menthol shipments from China in January, 1950, however, amounted to 20,430 pounds, valued at $193,691, as compared to 14,760 pounds ($115,827) in January, 1949. Total menthol shipments to the United States from all sources equalled 377,141 pounds, valued at $2,707,386. This was slightly less than the 1948 total of 427,854 pounds ($2,980,405), and a little more than the 1947 total of 368,382 pounds valued at $2,628,783. The 1942 figure amounted to 671,357 pounds valued at $4,957,018.

Vanilla Beans Steady

The vanilla bean market is remaining tight, with estimates already being made to the effect that the quantity by the end of the year will be small. It now appears, according to a government report, that production will be reduced by at least 200,000 pounds a year for the next three or four years, as a result of the damage done to the vines by the cyclone which struck Madagascar in early February. Madagascar and the neighboring Comoro Islands produced a normal crop of 990,000 pounds of vanilla beans in 1948, but exceptionally dry weather reduced the 1949 production to about 390,000 pounds. The 1950 vanilla bean production in Madagascar and the Comoros now is expected to amount to about 770,000 pounds.

Stocks of vanilla beans in Madagascar were about 660,000 pounds at the end of 1949, but heavy exports to France and the United States reduced the supply to about 350,000 pounds by the first of February, 1950. On March 23 of this year, vanilla bean stocks in Madagascar were judged to be around 225,000 pounds.

Mexican cuts are now quoted at $6.50 a pound, while the Mexican whole beans appear in the range between $7.25 and $7.50.

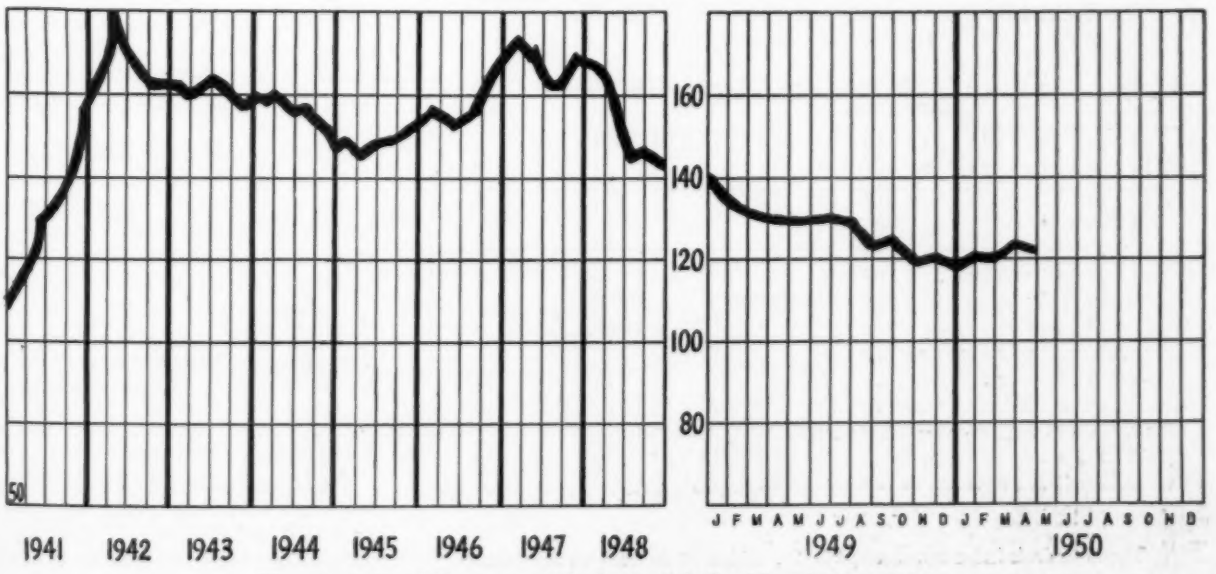
Glycerine Returns to Normal

Production of glycerine has been running very close to consumption during the first quarter of 1950. Domestic production has been on the increase since the end of the coal strike earlier in the year, when operations in consumer lines were affected. At the same time, some imports have been entering the United States. Latest figures available indicate that the February production of crude glycerine amounted to 17,262,000 pounds, while the consumption equaled 18,893,000 pounds. During the same period, stocks rose from 52,477,000 pounds at the end of January to 53,875,000 pounds at the end of February.

Lanolin Remains Stable

A few wool-scouring plants have shut down recently, but no shortage has developed in lanolin, or is expected in the foreseeable future. There is enough

50 Raw Materials—Weighted Price Index. 1926 = 100.



The price index of fifty commodities for April declined from 124.2 to 123.4.

APRIL PRICE CHANGES

UP

Balsam Tolu 55c
Benzoin Gum, Siam 10c
Cananga Oil, Native 50c
Horehound Herb 2c
Lime Oil, Expressed $1.25
Menthol, Natural 5c

DOWN

Almond Oil, Bitter 50c
Anise Oil, U.S.P. 15c
Benzoin Gum, Sumatra 5c
Carnauba Wax No. 1 22c
Geranium Oil, African $2.50
Geranium Oil, Bourbon $1.75
Golden Seal Root 25c
Ipecac Root 40c
Japan Wax 3c
Lemon Grass Oil 30c
Nutmeg Oil 20c
Ouricury Wax 7c
Papain, Pure, Powdered 25c
Petitgrain Oil, S.A. 15c
Pine Needle Oil 35c
Pinus Pimulio Oil 50c
Pinus Sylvestris Oil $1.75
Vanilla Beans, Mex. Whole 25c

material available, and the market seems to have become well adjusted. Prices have remained the same, the pharmaceutical grade selling for 28c a pound, and the cosmetic grade, for 30c or 32c a pound.

Prospects are favorable, since the curtailment in scouring operations has been confined to only a few mills. If additional mills should shut down, a serious condition might develop, but, according to a source in the trade, this does not seem likely at the present time.

Cod Liver Oil Change Expected

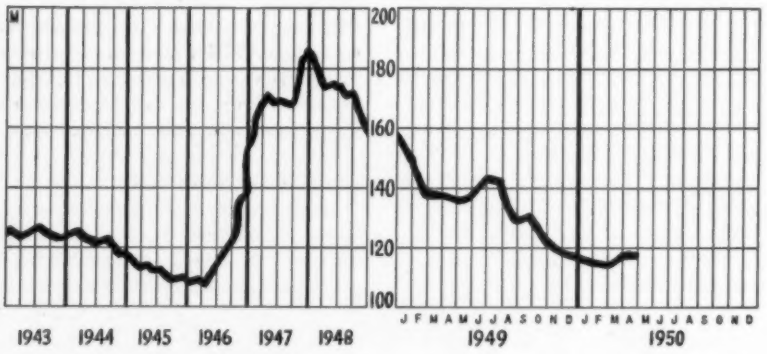
(Continued from page 587)

causing these countries to compete for new markets in order to sell the excess oil which would have ordinarily gone to the European area.

American importers of cod liver oil are postponing the placing of orders, pending the outcome of the expected price change. If there is a change for lower prices, importers will naturally take advantage of it.

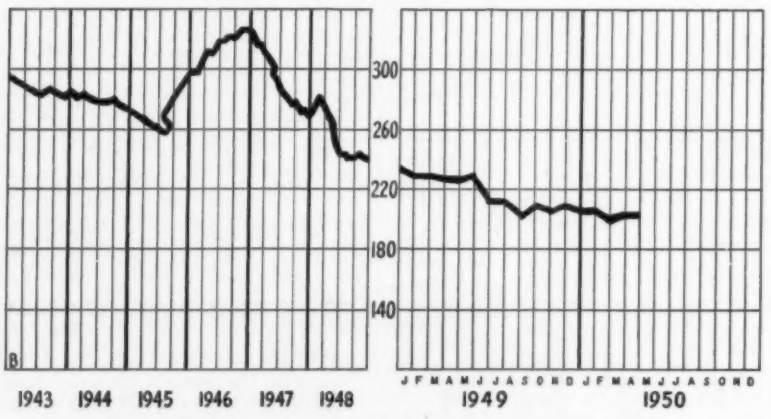
It is estimated that this year's yield of Norwegian cod liver oil will exceed that of 1949, although the final figures will not be known until the fishing season terminates at the end of this month. In Iceland the season extends through late June or July. Cod liver oil exports from Iceland amounted to 5,805,183 kilograms in 1949 and 8,035,392 kilograms in 1948, with the United States receiving 2,441,002 kilograms last year and 2,981,780 kilograms in 1948. Although Iceland's exports of the oil were drastically reduced in 1949, exporters are determined to remain in the United States market and compete with other foreign countries.

15 Medicinal Chemicals—Weighted Price Index. 1926 = 100.



The medicinial chemicals index advanced very slightly from 118.5 to 118.6. Menthol went up 5c.

15 Botanicals—Weighted Price Index. 1926=100.



The botanicals index remained at 202.6. Balsam tolu went up and ipecac root fell off.

Carnauba Continues To Decline

Carnauba wax continued to fall off in April, as a result of its placement on the barter list in Brazil. Prices at the end of the month extended from 83c to 86c for the #1 yellow, and 69c to 70c for #3 North Country. It is reported that users of ouricury are swinging over to carnauba as the price of the latter falls closer to the ouricury level of 74c to 75c.

Gum Exports, Brazil

Exports of miscellaneous gums from Belem, Brazil, to the United States during the fourth quarter of 1949 were valued at $111,956, compared with $47,322 in the same period of 1948.

Shipments of copaiba balsam from Manaus to the United States in the fourth quarter of 1949 had a value of $4,778, compared with $8,530 in the corresponding period of 1948.

Cod Liver Oil Exports

Estimated production of refined cod-liver oil in Newfoundland, Canada, in recent years amounted to 370,000 imperial gallons in 1949; 225,000 gallons, 1948; 350,000 gallons, 1947; and 421,000 gallons, 1946.

Exports of medicinal cod liver oil in 1949 equalled 135,690 imperial gallons, valued at $343,259, compared with 185,799 gallons, with a value of $428,202 (Canadian currency) in 1948. The United States received about 20 per cent of the total in 1949 and 75 per cent in 1948. Estimated stocks of refined cod liver oil in Newfoundland as of December 31, 1949 were 140,000 imperial gallons.

Naphthalene Flake Declines

Prices on naphthalene flake dropped one cent a pound last month, paralleling a similar price change in industrial naphthalene brought about by the influx of lower cost imported material.

• The new price for the flake is 11c a pound in barrels and 11¼c a pound in fifty-pound packages.

1950 Gernaium Oil Estimate

Bourbon geranium oil declined $1.75 last month and is now selling at $16.75 on the inside and $18 on the outside price. One report has it that the remaining crops gathered after the cyclone in the Reunion Islands in February yielded from 1/7 to ¼ of the normal supply. The total crop harvested from November, 1949, to April, 1950 added to the estimated September 1950 crop is expected to be 2/3 of the normal supply. Gernaium oil of African origin declined $2.50 and is now quoted from $15 to $16.

Anise Oil Reduced, Cassia Up

Anise oil, U.S.P., declined 15c during April and now appears in the range from $1.30 to $1.55. The lower price is attributed to reduced shipping prices and to the unloading of supplies from China. The spot price may decline further as dealers reduce higher cost stocks. At the same time cassia oil, also originating in China, shows signs of advancing with more than one source indicating an inside price of $3.00, and a few essential oil houses standing by last month's quotation of $2.25. This oil is said to be firmer because few offerings have been coming through from the primary center with the result that spot supplies are at a relatively low level.

Bois de Rose Firm

Replacements in bois de rose during April continued to be firm, as a result of the difficult supply position, as well as the fact that Brazilian exporters are paying more attention to such items as jute than to bois de rose, according to a spokesman, who states that this tendency is tending to diminish current supplies of oil coming out of Brazil. The season for bois de rose should be in full swing from now until the end of July, when the natives ordinarily penetrate the interior via the Amazon and tributaries with small boats. If the river does not rise sufficiently, transportation is hindered, and production of the oil is curtailed, as has occurred in recent years.

The latest figures available show that 19,470 pounds of bois de rose valued at $50,115 were exported from Brazil to the United States in January, 1950, as compared with 24,307 pounds at $71,927 in January, 1949. Total exports of bois de rose from both Brazil and Mexico for 1949 amounted to 478,611 pounds valued at $1,105,805, as compared to 112,066 pounds ($251,364) in 1948, 471,528 pounds ($1,438.586) in 1947, 553,547 pounds ($2,254,700) in 1946, 165,073 pounds ($657,033) in 1945, and 790,727 pounds ($2,187,235) in 1944. Imports amounted to 254,131 pounds, valued at $298,589 in 1939.

Lemongrass Oil Reduced

Lemongrass oil fell off 30c last month, the first decline since the sharp advances of last September. The current price range extends from $2 to $2.25.

Quicksilver Production Low

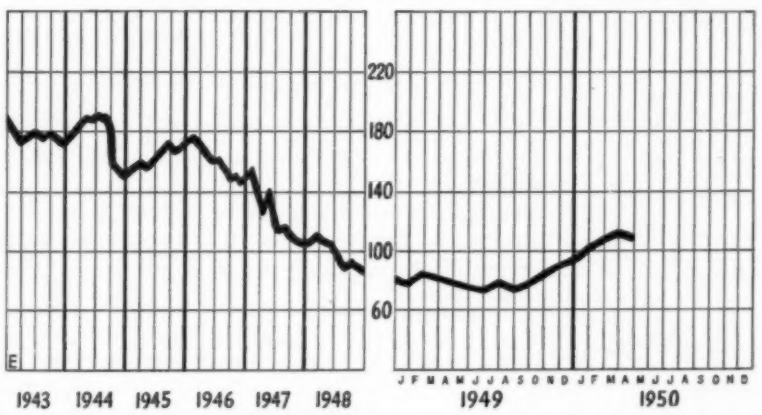
The latest development during April in the quicksilver market was the announcement by Mercurio Italiano, spokesman of all of the quicksilver mines in Italy, that the Leghorn Trading Co., Inc., 21 West Street, New York, had been named the exclusive agent in the United States and Canada for the sale of Italian quicksilver. This follows the earlier dissolution of the Spanish-Italian Cartel, Mercurio Europeo, and the subsequent naming of the International Quicksilver Corp. as the sole representative of the Spanish metal.

It does not seem likely that this development will cause any immediate reduction in price of quicksilver, although it has been reported that imports of the metal are entering the United States at a high level. Compared to the 10,000 flasks brought into this country during the first quarter of 1949, late arrivals from Spain and Yugoslavia have almost doubled this figure during the first four months of 1950, reaching approximately 18,000 flasks.

Domestic production of quicksilver, on the other hand, is continuing at a low level judging from reports that the Sonoma mine in California is the only one operating in the United States at the present time. The yield is said to be from 200 to 300 flasks a month. The high cost of production is the principal factor in determining how many mines shall operate, for as the market price falls, the operators close down their mines to await an upturn in price.

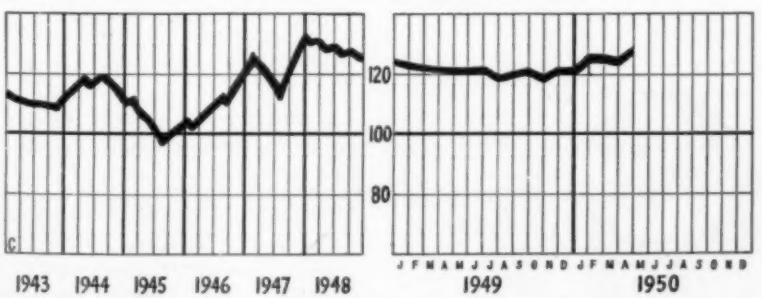
In addition to the Sonoma mine, quicksilver production in the United States at the present time is slightly augmented by mining efforts of the panhandlers, amounting to about 15 or 20 flasks a month.

15 Essential Oils—Weighted Price Index. 1926 = 100.



The essential oils index declined from 111.4 to 107.6. Cananga oil and lime oil were higher; anise and geranium oil were lower.

25 Cosmetic Raw Materials—Unweighted Price Index. 1926 = 100.



The cosmetic raw materials index advanced from 125.3 to 128.0. Balsam tolu and menthol went up.

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(*Continued from page 582*)

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Of course, there is the public relations activities of your company or your advertising agency. We are seeing an increase in the use of the columns of science writers to disseminate information on new drug products. All of you are familiar with the sensational sales of several of the antihistaminic preparations due in large measure to the articles that appeared in national magazines. Many new drugs receive a tremendous boost from this kind of publicity and I know few of you are so naive as to assume these write-ups just happen. Bear in mind that this material is printed because the newspaper or magazine, or syndicated news services believe it is of genuine interest to their readers and is, in fact, news-worthy. Your entire approach therefore should be shaped with this thought in mind.

And now, let me quote from a newspaper release by the American Medical Association.

"One of the frequently overlooked aspects of these modern medical miracles is the recentness of many discoveries and the speed with which these discoverises were put into practical use. Insulin sounds like an old name, but it was discovered in the early twenties. The sulfonamides have been in general use only two or three years more than a decade. The widespread use of penicillin is less than ten years old."

"Sensational medical advances of the past 50 years probably will be overshadowed by medical progress during the second half of the 20th Century."

Evidently many of you will be actively engaged in the promotion of new products many times in the months and years to come. The best of luck and success to all of you.

Manufacture of Tablets

(*Continued from page 526*)

The next installation should serve as a good example of the double compression or slugging process, which I discussed in the first article of this series.

The installation, which I will describe, is that of the B.C. Remedy Company, Durham, N. C., manufacturers of the well-known "B.C." Headache Powders and tablets.

For many years this company had successfully marketed their product in the form of individually packaged powders, developing an enviable sales record of many millions per year. It was the opinion of the management that the same product in tablet form would attract many people who are prejudiced against the powder form of dosage. In order to determine the possibilities extensive marketing surveys were conducted which fully justified all expectations and the

decision was made to set up tablet manufacturing facilities It was at this point that I was consulted and given the assignment.

From previous experience with this type of combination I knew that the double compression process would be the most economical and also the most satisfactory method of producing these tablets.

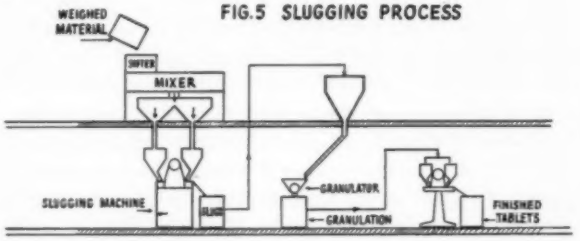
In planning the layout it was decided to make the initial installation fairly flexible so that it would not only operate economically on the immediate requirements, but also would have sufficient capacity for expanded future requirements without alteration or additional equipment.

The plant is housed in a modern five story building of brick-concrete and steel construction. The entire building is air conditioned to insure favorable conditions for operation of equipment and insure stability of the products.

All equipment coming in direct contact with the materials is of stainless steel or monel construction.

Shipments of incoming materials are carried by elevator to the fifth floor, where chemical storage is located. Date of arrival is marked on all containers and all are individually sampled, then subsequently checked by the control laboratory for identification and purity. Materials cannot be used until approved by this department.

FIG.5 SLUGGING PROCESS



B.C.REMEDY CO.

In order to eliminate unnecessary handling the weighing and mixing equipment was set up on the fifth floor convenient to chemical storage and operation proceeds as follows—see flow sheet Fig. 5 of complete process.

Materials are weighed into stainless drums and lifted

Figure 6

Fragrances that help sales

Moussaldine

French in character, and distinctively modern, Moussaldine imparts a versatile and truly individual note to the creation of fine perfumes.

As a base, it will enhance your Chypre, Fougere, and Aldehyde compositions. Used alone, it will lend warmth and distinction to your finer Perfumes and Toilet Waters.

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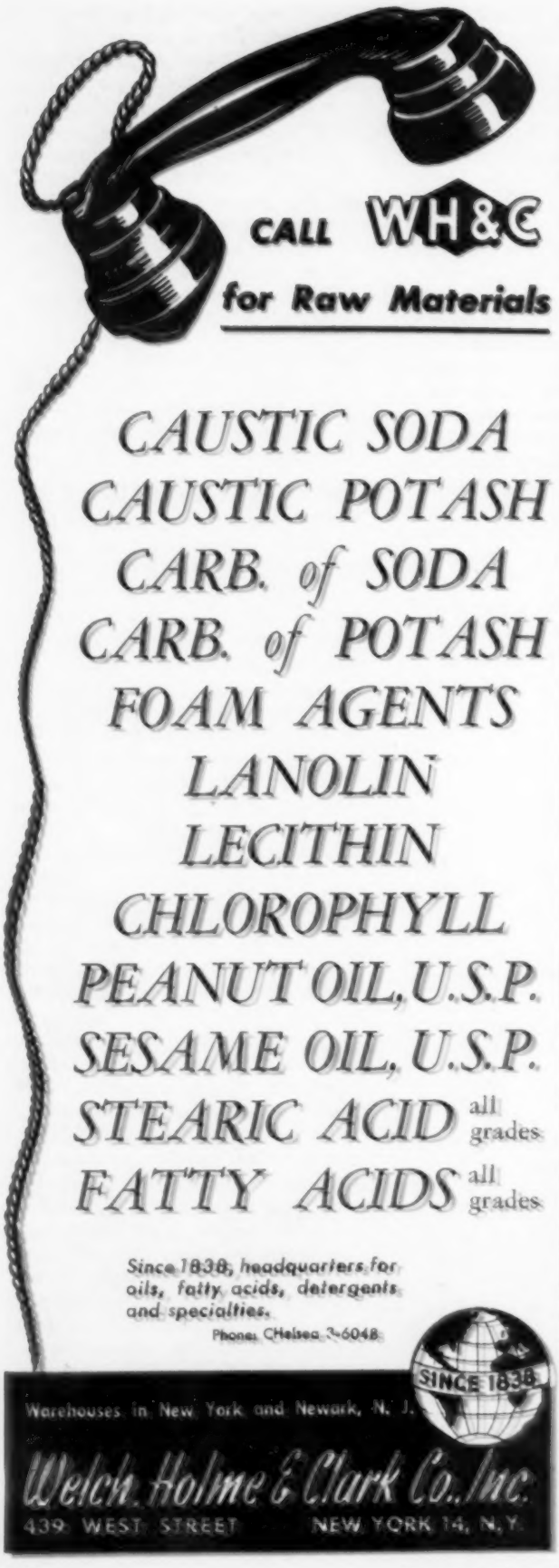

Advertising Pharmaceuticals

(*Continued from page 582*)

promotion in mind and if possible design your medical literature to fill this need.

Public Relations

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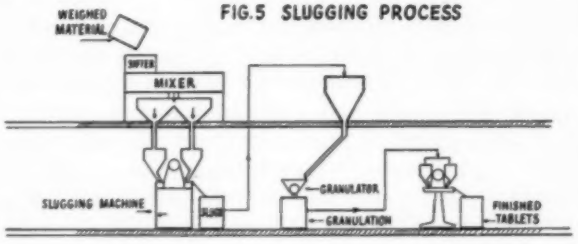

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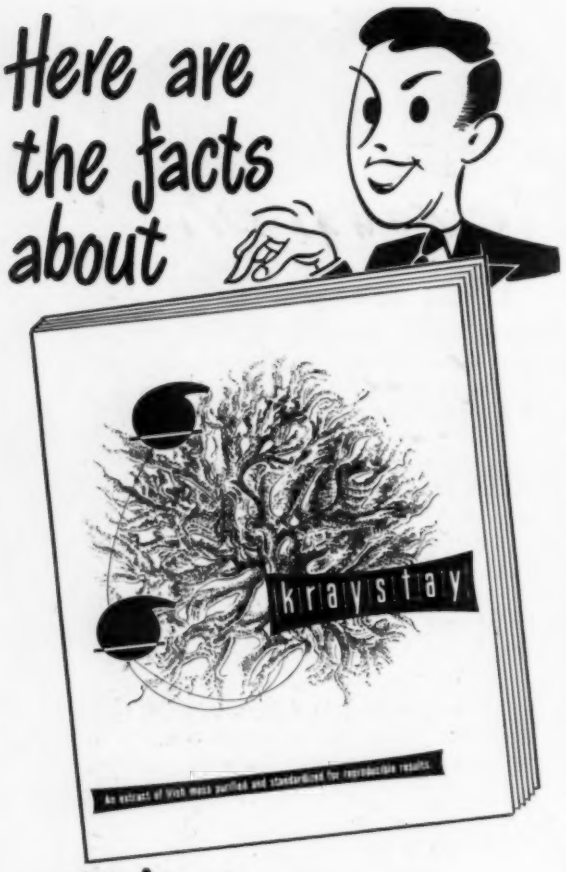

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by an electric hoist for convenient dumping into the sifter and mixer. After thorough mixing the batch is discharged into a hopper directly beneath the mixer. The hopper is fitted with ribbon type conveyors to carry the material to the drop pipes which discharge into the hopper of the slugging machine located on the floor below (Fig. 6).

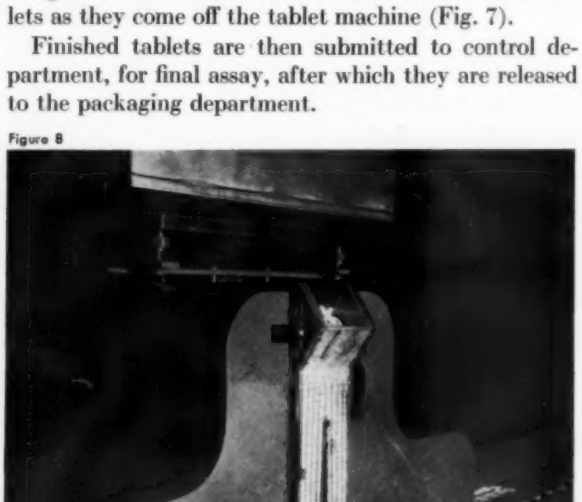
Vibrators, attached to each hopper of the slugging machine, insure a continuous flow of material into the respective feed frames.

Figure 7

Slugs are then transferred to the fifth floor and after aging are dumped into a large hopper from which they are fed by gravity into an oscillating granulator, which breaks them down into the final granulation. This granulation is then ready for compression into finished tablets on a double rotary machine. A specially designed chute removes most of the dust from the tablets as they come off the tablet machine (Fig. 7).

Finished tablets are then submitted to control department, for final assay, after which they are released to the packaging department.

Figure 8



A machine designed to flip the tablets over permits inspection of both sides, at which time imperfect tablets are removed.

Figs. 8 and 9 show automatic packaging equipment filling the twelve tablet size, inserting folder and closing container.

Almost all prosperous companies at some time in their existance find that the management has been more concerned with sales than with the production problems. Gradually they begin to find that certain items are being "back ordered." The sales department then begins to complain and the management starts to put pressure on the production manager. He in turn tells of his troubles and you find that the manufacturing facilities are inadequate. There is a bottle neck somewhere along the line or they have reached the limit of production.

Figure 9

This can be attributed to many factors. Mostly the blame is laid in the lap of the production department for not expanding production, for not using any foresight, etc. The production department then retaliates with the old cry,—"The management won't spend any money for new and up to date equipment," "They won't give me any more help," "We don't have enough room" and so it goes. I have heard the above on many occasions, as to whose fault it is—it's everybody's, and I have generally had to act as the referee.

Speaking from experience, here is what I have found often happens. A company starts out to manufacture tablets, usually the initial line consists of just a few items on a small production basis. They are concerned with initial expenditures and start out with possibly a single punch tablet machine, a small mixer and drying cabinet of some description, a few screens or perhaps a granulator and a couple of benches.

If they already have a plant they look around for a vacant spot and say this will do for a time until we see how business goes. If the room is of any appreciable size the equipment looks lost. After a time business increases and in order to meet demands possibly a small rotary machine is acquired. This in turn consumes the granulation much faster and larger mixing, granulating and drying capacity is soon needed. Gradually new items are incorporated into the line and still more equipment is acquired.

At first there is plenty of room. The equipment

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KOMMON SCENTS!

It gets increasingly difficult to keep politics out of things, mainly because it's tougher to keep things out of politics. Guys who couldn't make a simple declarative statement without the use of legal counsel suddenly consider themselves statesmen.

•

For awhile, it even looked like baseball, which used to get along with only league umpires, was headed for a Supreme Court decision. It develops the club owners were buying their bats, balls and players on the same voiceless invoice.

•

Latest mental gem, out of Washington by way of Colorado, came from Senator Johnson, who wanted to curb the movie industry by licensing actors, producers and distributors. Appropriately, he was answered by Eric Johnston, the Hollywood mouthpiece, who thinks our freedoms are best preserved when they are untrammeled, especially when he's in charge of untrammeling.

•

Johnston recently refused an exhibition seal of approval to "The Bicycle Thief," a very fine Italian movie, on the grounds that a child in the movie follows his father into a house of ill-repute. Johnston, it seems, finds no moral difference between four-syllable words and four-letter ones.

•

The political invasion of Atomic Energy has been answered by the scientists who now sound off with Good Government recommendations. The scientists proceed on the antiquated theory that their brains are no insurmountable handicap in arguing with politicians.

•

Greatest switch of all came in Senator McCarthy's attack on the State Department. His indictment forsook the legal principles established by Jefferson, Marshall and Holmes for the pathologic ones of Freud and Kraft-Ebbing.

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Only the Cosmetic Industry has developed an immunity to political infiltration. One suspects it is a resistance developed from having payrolls chronically peopled by relatives.

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originally was spaced far apart for appearances' sake. Then with the gradual acquisition of more equipment plus the increased operating personnel and the handling of larger batches of materials things get a little crowded. However, man is a wonderful creature and he adapts himself to most contitions and works along in the same old way. By this time production is really rolling. Another piece of equipment is purchased and in order to squeeze it in some of the other equipment has to be juggled around or pushed a little closer together in order to accommodate it. Sometimes it just isn't practical. The point has now been reached when something has to be done in order to relieve the congestion, but what happens? Most people say, "We can get along now for awhile, but someday we will have to do something about it." Maybe you do and maybe you don't.

You look around for more room. Most of the available space is occupied with other departments. You consider building an addition to the plant, but on obtaining estimates at prevailing prices the matter is dropped like a hot potato and the whole idea is pigeonholed. A few months later conditions reach a point where definite steps must be taken and fast.

You have lived with your problems and your plant so long that perhaps you cannot decide what is best or how you are to accomplish the desired results. This is where outside assistance is advantageous. An outsider who has an open mind backed up with experience can appraise the situation in a short time and come up with suggestions that possibly never occurred to you or your staff.

The remodeling job I will describe was carried out at the plant of Bowman Bros. Drug Company, Canton, Ohio.

This is an old established company, which started out as a physician's and hospital supply house, subsequently they started to manufacture liquids and ointments for their clientele. At a later date compressed tablets were added to the line, mostly private formulas at first and then gradually expanding to specialties. Like the example cited previously this company started to produce tablets on a small scale. They had a space available and this was chosen for the tablet department. As the line continued to expand and sales increased, additional equipment was acquired, but finally they reached a point where they were suffering severe growing pains. The sales requirements had reached a point where the demands exceeded the production facilities. The granulating, compressing and coating operations were all carried out in one room producing crowded conditions. Additional equipment was needed and there just wasn't any place to put it

I was called in and given the assignment to remodel the tablet department within the limits of the present building and to expand production capacity keeping expenditures within reasonable limits

Fig. 10 shows the proposed layout. You will notice that here again we have an "L" shaped building, It seems that I have an affinity for buildings of this shape. The main building is two stories high, except the south-

ern wing which is a single story building. Unfortunately its floor level does not coincide with either floors of the other buildings. The management felt this building could be used for the compressing and coating department.

After studying the situation I was able to point out many disadvantages and recommended that it would be more practical to lay out the tablet department on the second floor and keep it all on the same level. The section marked "granulating department" at that time was the complete tablet department and the space now occupied by the compressing and coating departments was used for liquid manufacturing and bulk storage. To move the liquid equipment, shelves, and paraphernalia, looked like a formidable task at that time. However, as so often is the case when the job is accomplished you can sit back and say "well it was worth the effort."

Drying cabinets were installed along the south side of the granulating department, this being the only solid wall. Drying had previously been carried out in a hot room. As this room was well constructed and practically air-tight it was figured it could easily be converted into a molding room for hypodermic tablets with an adequate air conditioning and exhaust system.

Figure 10 is self explanatory. Materials are carried from the loading platform to chemical stock without much trouble. All incoming materials are checked before releasing for manufacture. Uncoated and coated tablets can be transferred directly into packaging and finishing department. Materials are all flowing in one direction.

We were confronted with the problem of noise transmission as the floors were of wooden construction. Since the showroom was directly beneath the compressing and coating department, it was essential that the noise level be reduced to a minimum. This was accomplished by covering the old floor with sound absorbent material and laying a new hardwood floor over this material. In addition vibration isolators were installed on the individual machines.

The only mechanical equipment purchased was a mixer, comminutor and a heavier model rotary tablet machine, which, with the equipment already on hand, should provide sufficient capacity for a long time.

Space has been provided for the installation of additional equipment at future dates without having to move the individual units as they are now placed. Separation of the various departments has eliminated the congestion and provided better operating facilities.

It is my hope that the descriptions, though brief, will give some idea of what can be accomplished if careful planning and thought are given to the problems.

Picture Credits: Part II: Anglo American Mill Corporation, Owensboro Ky., Page 471; Arthur Colton Co., Detroit, Page 455, bottom page 468; page 476; W. J. Fitzpatrick Co., Chicago, top page 468; Kux Machine Co., Chicago, page 472; Lydon Brothers, Hackensack, N. J., page 469; National Drying Machine Company, Philadelphia, page 470; Read Machinery Div., Standard Stoker Co., York, Pa., bottom page 400; bottom page 458; Robinson Mfg. Co., Muncy, Pa., top page 409; F. J. Stokes Machine Co., Philadelphia, top page 458, pages 459, 474 and 475. Part III: Van Pelt & Brown Inc., Richmond, Va., page 526 and B. C. Remedy Co., Durham, N. C., pages 593, 594 and 595.

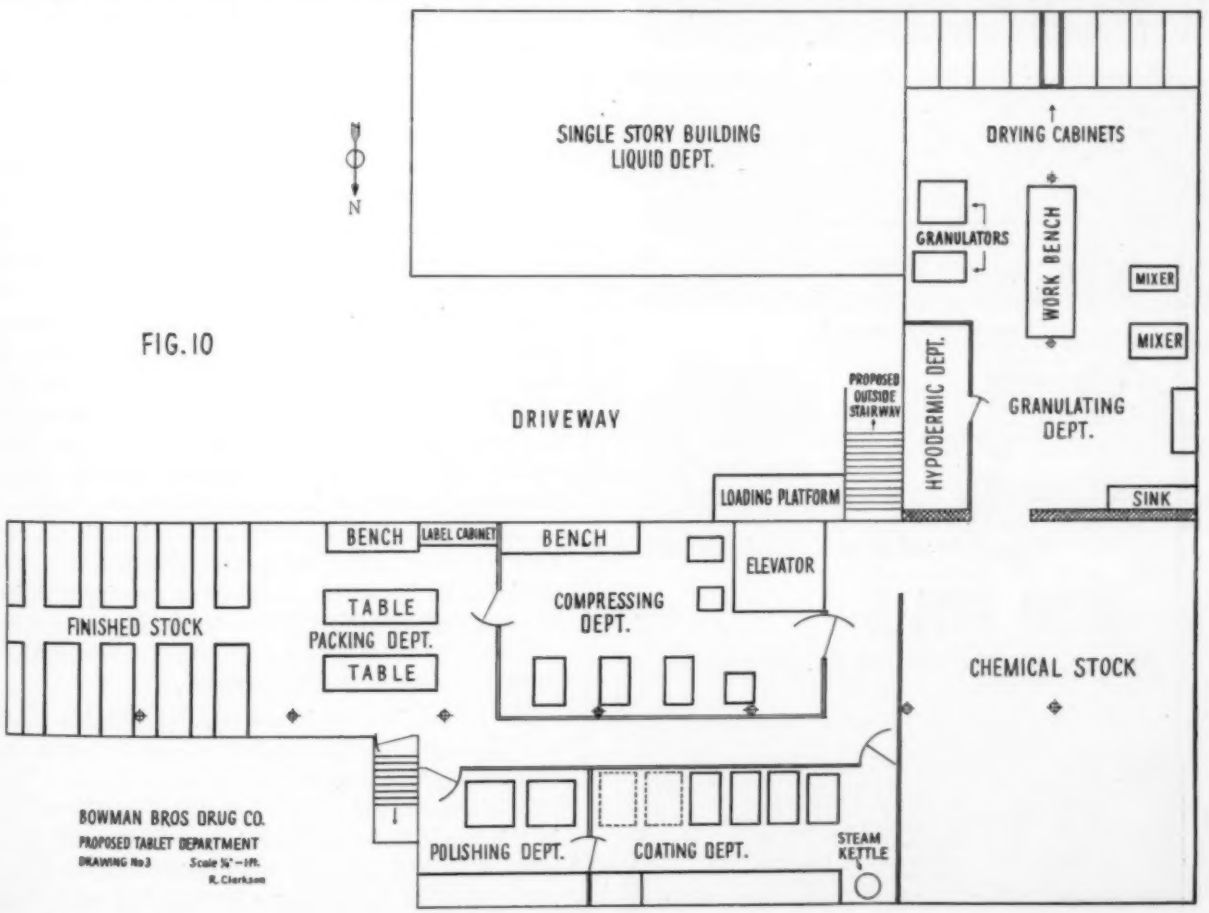

FIG. 10

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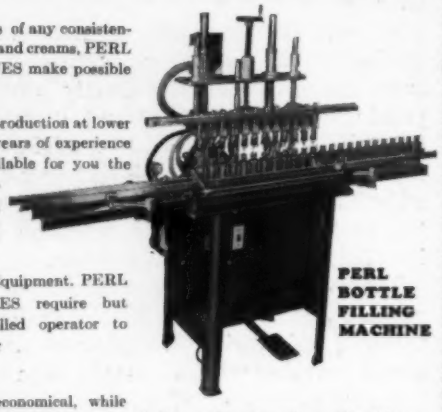

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The Arthritis Drug Frenzy

(Continued from page 527)

of the *Dioscorea* family by Syntex, S. A. This material is beng supplied by Syntex to several pharmaceutical manufacturers in this country. Another preparation is Artisone, also produced by Syntex from the same source as pregnelonone, and marketed exclusively by Wyeth, Inc. Neither of these preparations contain an oxygen atom in the 11 position, heretofore considered essential in an antirheumatic steroid. Artisone, delta 5, pregnene, 3 beta, 21 diol—20 one—21 monoacetate, has been known for the past ten years and has been used by Syntex as an intermediate in the manufacture of other hormone compounds. Its synthesis requires about nine separate steps from the sapogenin obtained from the plant. Pregnenolone has a simpler structure, delta 5, pregnene, 3 beta, ol—20—one, and requires only five steps from the original sapogenin. Therefore, pregnenolone will be in greater suppy than Artisone by a ratio of about 30 to 1, it is said. The simpler synthesis also makes it possible to sell pregnenoline at considerably less than Artisone. While pregnenolone has been approved by the Food and Drug Administration, Artisone is still undergoing extensive clinical tests, and is not expected to be approved until these tests are completed the latter part of this year. The selling price of Artisone, when approved, is expected to be about half the price of cortisone.

Both of these products must be administered continuously to obtain relief, much in the same manner as insulin must be continuously daministered for the control of diabetes.

Another method of treatment developed for arthritis as the result of the discovery of cortisone and ATCH is the use of injections of desoxycorticosterone acetate (DCA) and vitamin C in rapid succession. This method was discovered and developed in Sweden last year, and was later tested in England and in this country sometimes with good results and sometimes with none. A later technique makes it possible to inject the two drugs at the same time with the same syringe. Responses to this treatment are most rapid, in many cases occurring within two or three minutes after injection. However the response lasts only a few hours to a few days—rarely as long as a week. New injections must then be given as with the other arthritis drugs now under investigation. This treatment is meeting with increasing application in this country and is thought by some investigators to hold out the most immediate promise of relief to arthritis sufferers.

The intense interest in remedies for arthritis which was highlighted by the original announcement of the effectiveness of cortisone, arises from the fact that there are some eight million sufferers from this malady in this country alone. Once it was found that cortisone—a steroid hormone preparation—was dramatically effective in immediately relieving the worst

type of cases of this disease, it was natural that research into the probable effectiveness of all manner of products of this class should multiply rapidly. Therefore, one can easily assume that the end of this study has not been reached by any means, and that before long numerous other preparations of this type will make their appearance in the market. The sufferer from rheumatoid arthritis is now getting real attention from pharmaceutical manufacturers, and it is safe to predict that in the not too distant future there will be reasonably priced products to bring him comforting relief from his agony.

Recently a still different type of drug was placed on the market by Commercial Solvents Corporation. This product is glucuronolactone, being sold under the trade name, Glucurone. This drug represents a new approach to the treatment of arthritis in that treatment is along physiologic lines in which normal body functions are restored by replacing a deficiency in the body encountered in these diseases. The product overcomes the discomfort and deformity of arthritis through direct attack on the factors responsible for the athritic process. It exerts little if any analgesic action; clinical improvement is produced through its influence upon the metabolism of bone, tendons, and cartilage. In fifty cases of arthritic conditions, nine showed complete remission, 19 showed major improvements, while 8 remained unimproved. The cases which responded best were the comparatively early cases of osteoarthritis. Cases associated with sciatica showed dramatic results. This product appears to have a promising future in the treatment of athritis.

But despite the great interest in the pharmaceutical manufacturing industry and in the medical profession concerning these new and dramatic treatments for rheumatoid arthritis, two outstanding medical men in the field of arthritis expressed preference for the old method of treating arthritic conditions with gold salts. Only last month, Dr. Russell L. Cecil of Cornell University Medical College in New York told the Clinical Society of the New York Polyclinic Medical School and Hospital that while cortisone and ACTH act quickly to relieve pain and swelling, these compounds must be injected daily, that they are costly and in short supply, and that there is evidence of undesirable side-effects requiring more investigation.

"On the other hand," said Dr. Cecil, "gold compounds, although requiring slightly longer to provide relief, cause a remission of symptoms in about sixty per cent of patients when treatment is begun early. The remission lasts six months to a year and may be permanent. Only 25 milligrams weekly is required and this costs very little."

Dr. William B. Rawls of the Polyclinic staff said that cortisone and ACTH serve merely as "crutches" for arthritic patients. He urged physicians not only to maintain gold therapy with solganal, myochrisin and other preparations, but told them also that at present gold treatment cannot be discarded.

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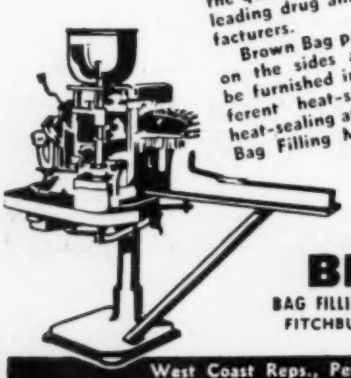

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Solidified Fragrances

(*Continued from page 523*)

on the appearance of the final product. The rapidity of cooling and subsequent gelation must be carefully controlled. Certainly too fast a cooling rate would cause greater crystallization and greater opacity. A good general rule seems to be the slower the cooling rate, the greater the transparency. Too fast cooling would very often cause a multiphase system to be set up. This is due to the poor conductivity of the system to heat and therefore cause the outer periphery of the stick to gel much sooner than the interior. This difference in the cooling rate would cause a marked disparity in the micelli structure in the periphery as compared to the interior.

Since this preparation has so high an alcoholic concentration, its number one bugaboo would be evaporation. This is offset to some extent by the incorporation of a polyhydric alcohol, but since most of the products on the market contain large concentrations of alcohol, such types appear to be the most desirable, and it would therefore appear imprudent to increase the humectant and soap to a point where evaporation would be negligible. This of course could be done. If the high concentration of alcohol is desired, mechanical means must be resorted to cut down on evaporation. Currently, these preparations are being wrapped in a foil wrapper and packaged in a sealed, wide-mouthed glass tube.

The preparation is a moulded product and therefore will liquify under the influence of the proper amount of heat. Their display in street windows should therefore be avoided since the temperatures possible there may become excessive. A current practice seems to be the display of dummies, which may be made from a polyhydric alcohol and soap mixture. So large a concentration of soap could be incorporated in a vehicle of this type that it could be made to stand up under any temperature short of the boiling point of water.

Whether or not the current trend towards preparations of this type will continue is difficult to foretell. It is also difficult to explain why after enjoying an indifferent success for about ten years, when it first was introduced, it should suddenly become one of the better selling products now available. If the popularity remains lasting, there will undoubtedly be further work done to eliminate the obvious deficiencies now incorporated. However, there does not appear to be much point in setting up a project along those lines until there is enough evidence of stability to justify the cost of such a project.

Cosmetic Allergies

(*Continued from page 517*)

The first cosmetic to be discussed is nail polish. In reviewing the medical literature it was noted that many isolated cases of nail polish dermatitis have been reported by doctors. Very often they state that the use of nail polish has been discontinued and the dermatitis

has disappeared. From a medical viewpoint the case has been solved but for the woman who feels nail polish is an important part of her beauty aids this is not a very satisfactory solution to the problem. Due to the fact that nail polish is such a complex substance it is very difficult to determine the offending ingredient. The formula for a good, durable nail polish contains five basic groups which are (1) nitrocellulose or some other cellulose compound—for body and strength of the film (2) resin—for gloss and adhesion (3) plasticizer—for flexibility (4) solvents—to keep the materials in solution for easy application (5) dyes and pigments—to give desired shade to the lacquer. Some nail polishes may contain as many as six ingredients from one group, so the complexity of the material is quite understandable.

Dr. H. Silver and B. Chiego, Ph.G. ran patch tests with the dyes and solvents found in nail lacquers and with the finished product itself. As many as 5084 patch tests were performed on 62 different individuals, some of whom were normal and others who had shown allergic symptoms. The only reactions they noted were to the dye patch tests and they were only occasional. Strange as it may seem no reaction occurred when the same persons were tested with the dye when it was incorporated in the nail lacquer. The reverse of this condition has also been reported. Certain substances have been found innocuous when used by themselves but have been proven to be sensitizing when combined with other materials. This is, indeed, one of the mysteries of allergy for which there seems to be no explanation.

Drs. F. A. Ellis and H. Kirby-Smith after studying five cases of nail polish dermatitis concluded that the offending agent is cellulose nitrate and/or the dyes. They also believe that the patch tests are of little value when the dermatitis is localized.

Dr. R. B. Palmer studied nine cases of nail polish dermatitis to determine the offender in nail polish. Six of the nine patients tested reacted to one or more colorless nail polish. From his data he concluded that the body or synthetic resin of the lacquer is the most likely factor in the sensitization and, although any substance may be a sensitizer, dyes and pigments are not the most common ones.

Dr. F. M. Simon reported performing patch tests on seven patients suffering from nail polish dermatitis. Twenty-five chemicals found in nail lacquers were used in the patch tests. All of his patients reacted to only one chemical, a sulfonamide formaldehyde resin. He is of the opinion that this resin is the chief allergen in nail lacquers. The authors, however, have noted many cases of sensitivity in nail polishes containing no nitrocellulose or phenol or amide resins.

Drs. W. D. Dobes and P. H. Nippert observed 90 cases of nail polish dermatitis. Thirty of these cases were patch tested with various ingredients contained in nail lacquers. Reactions were noted to dyes, resins, nitrocellulose and solvents.

Drs. E. D. Osborne, J. W. Jordon and P. C. Campbell,

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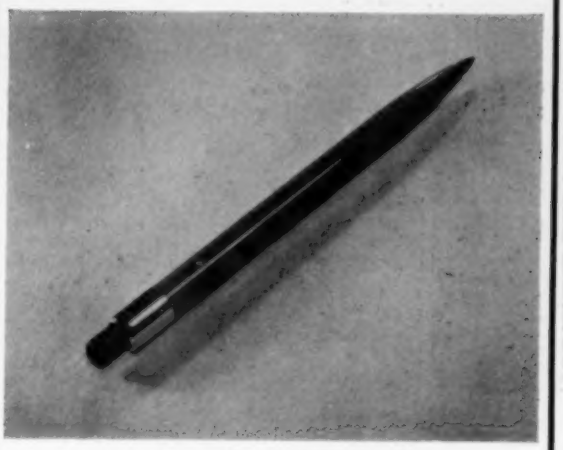

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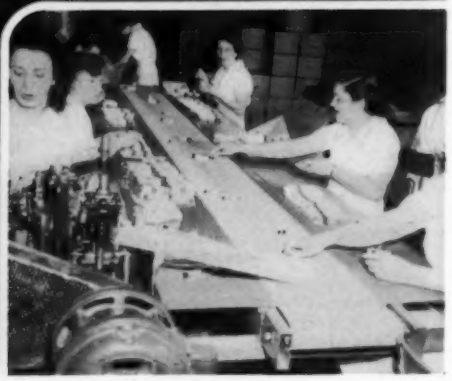

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Jr. studied one hundred cases of nail polish dermatitis and they, too, report that the sensitizing agent is usually the resin or plasticizer, less frequently the cellulose nitrate and rarely the pigments.

As we can see from the data published in the medical literature it is impossible to designate any one ingredient of nail polish as the chief offender. Materials from all five basic groups have been reported as chief offenders. We can note, however, that resins have been reported most frequently as the principal sensitizer followed by nitrocellulose and dyes.

Eruptions in nail polish dermatitis may vary in form and location. Of the one hundred cases studied by Drs. Osborne, Jordan and Campbell, seventy-eight had reactions on their eyelids. Others had reactions on various parts of their bodies. Seven out of the nine of Dr. Palmer's patients also had reactions on the eyelids, and the lesion was usually in the form of a red, scaly patch.

In nail polish dermatitis the eyelids appear to be the most vulnerable spot. This seems quite logical if we examine the thin, delicate tissue of the eyelids. The nail itself is hard and tough and therefore would not be susceptible to sensitization. The affected area must have constant contact with the allergen and there is no part of our face we seem to touch more than the eyes. Although this seems to be the most common area affected, cases have been reported of high degree of sensitivity involving all areas of the body which were touched by the hands. Other areas often affected are the neck, face, chest and back.

The second cosmetic to be considered is lipstick. Lipstick, like nail polish, contains some very common cosmetic allergens. The reason is probably the same as that which we encountered in nail polish, i.e. the many groups of materials composed of several or more ingredients that are necessary to formulate a good lipstick. A good lipstick must have the properties of easy and even application, good consistency, non-bleeding, pleasant taste and odor. To achieve this the lipstick must contain the following groups of materials: Oils, waxes, indelible dyes, pigments and perfumes. From this we can see that lipstick, too, is a very complex cosmetic.

Dr. Marion Sulzberger has done a great deal of very valuable investigational work on cosmetic allergies. He and Dr. J. Goodman report that eight persons exhibiting lipstick dermatitis or cheilitis as it is called were tested to determine the offender. Five different ingredients commonly found in lipstick bases were used on each person. The ingredients were: paraffin, petrolatum, castor oil, stearic acid and cetyl alcohol. No reactions to these substances were observed. Lanolin, however, an ingredient of some lipstick bases was also patch tested and a marked sensitivity to this was exhibited. It was concluded from this series of tests that lipstick sensitivity is due mostly to dyes rather than materials comprising the base. Although there is a possibility that the ingredients of the base may have influenced the sensitization to the other constituents. To substantiate this twenty pure dyes and pigments (as

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commercially prepared) commonly used in lipsticks were tested. These were first tested on normal people for irritating properties and none were found. Then fourteen people suffering from cheilitis were tested. Eight of them reacted to at least one of the indelible dyes used and five others of the fourteen showed reaction to one or more of the nonindelible colors. One of the eight persons having lipstick cheilitis gave no positive reaction to any ingredient in the lipstick.

Methyl heptine carbonate, a synthetic ingredient of rose perfume, which is very often used in lipstick, was suspected as a sensitizing agent. Eight patients of Sulzberger and Goodman showed no reaction to patch tests of this material, but, it is possible, as was noted in the discussion of the base, the perfume may be a factor in producing sensitivity to other ingredients.

Further work was done on indelible dyes by Drs. Sulzberger and Hecht. Twelve patients were tested with tetrabromofluorescein, an indelible dye used quite extensively in lipsticks. Tests were run first on the dye in its commercial form as obtained from the supplier and ready for use in the manufacture of lipsticks. All twelve patients had positive reactions to the test. The dye was then purified. The purified material was tested in the same manner and all reactions were negative except one and this was only slightly positive. Further tests of Sulzberger and Hecht proved that purification of the dyes removed rather than destroyed some allergenic ingredient or ingredients which were responsible for the positive patch test reactions. The same indications were obtained with dibromofluorescein, another indelible dye. It appears from this that dye sensitivity is not usually due to the dye but to impurities found in the dye. Of course, in some cases the sensitivity to the purified dye is also possible.

Drs. S. J. Zakon, A. L. Goldberg and J. B. Kahn are also of the opinion that the indelible dyes are the most frequent causes of lipstick dermatitis. Sensitivity to the lake colors used in lipsticks appears to be rare. Drs. Zakon, Goldberg and Kahn studied thirty-two cases of lipstick dermatitis. A lipstick containing no indelible dye was prepared. This was used in place of the lipstick regularly used by the thirty-two patients. The symptoms of cheilitis disappeared within an average of two weeks. As long as the non-indelible dye lipstick was used the symptoms did not reappear.

Two cases of lipstick cheilitis reported by Drs. A. Sezary, A. Horowitz and H. Genet and one case by Dr. F. F. Hallier indicate an indelible dye to be the offending agent. Drs. C. Flandin, H. Robeau and Ukrainszyk reported a case of lipstick cheilitis due to indelible dyes and perfume.

From the clinical investigations and testing reported on lipstick cheilitis it appears that dyes, especially indelible, are the chief sensitizing agents found in lipstick. Perfume and lanolin should also be considered a possible offender when lipstick cheilitis is being studied.

Lipstick cheilitis is fairly easy to diagnose. The eruptions usually appear only on the lips or the skin closely surrounding the lips. The lips often swell and

become scaly and dry. Of the thirty-two cases studied by Drs. Zakon, Goldberg and Kahn seven patients had reactions on other parts of their bodies in addition to the reaction on the lips.

As with most cosmetic allergies, lipstick cheilitis is usually developed shortly after a new brand of lipstick is used. However, cases have developed from the same brand of lipstick after years of continued use.

The last cosmetic to be discussed is face powder. This is probably the most widely used cosmetic on the market today, and rightly so as it is so important for a glowing skin that it is desired by all women. Fortunately, today this cosmetic can be reported as a very rare offender. At one time face powder caused a considerable number of cases of allergy. Scientific investigations were carried out and the principal allergen was discovered to be orris root, one of the most versatile ingredients of face powder. Orris root powder has a pleasant odor, good adherence and serves as a base for the perfume. Since the recognition of orris root as such a common offender, many manufacturers have omitted this from their product and substituted other materials with equally good properties. The other ingredients of face powder appear to be very innocuous and if this cosmetic should be suspected as allergenic it is probably due to orris root or occasionally the dyes. This may easily be eliminated by choosing a powder that does not contain that particular ingredient.

In addition to the cosmetics already discussed a few comments on other cosmetics will be made. For the most part cold creams and vanishing creams cause very little concern. Lanolin, petroleum jelly and beeswax which are found in certain creams have been reported as possible sensitizers along with some perfumes.

Foundation creams like powders and creams are relatively innocuous but can be sensitizing to some persons and should not be ruled out by the physician.

Hair preparations including wave sets, tonics, brilliantines and especially dyes should be high on the suspect list when cosmetic allergies develop.

Experience has indicated that many allergic reactions may arise from preparations which in themselves are entirely harmless. Liners in bottle caps, contamination of containers and manufacturing equipment may also brand cosmetic products as sensitizing agents.

Now that we have seen what a cosmetic allergy is, how it mainifests itself and what the chief offenders are, let us consider what should be done about a cosmetic allergy. As in any other sickness or disorder of the body the first one to be consulted is the physician. In a case of suspected cosmetic allergy the one most familiar with this subject would be a specialist (either an allergist or a dermatologist). He has had training and experience that will enable him to diagnose a case in the shortest possible period of time. Once the case has been diagnosed and the manifestations have disappeared the patient should not feel that she can never use a particular type of cosmetic again, say lipstick in the case of lipstick cheilitis. As a result of the great increase in the number of cases of allergies from cosmetics, cos-

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metic companies have been established which specialize in the production of hypoallergenic cosmetics. The term "hypo" meaning less rather than nonallergenic is used because as was stated previously there are some persons who are sensitive to the most innocuous ingredients. There will probably never be any one material that will not be an offender to some one.

The physician will probably recommend the use of cosmetics manufactured by one of these companies. The products made by these companies are prepared from the highest quality materials and the common sensitizers have been eliminated as much as possible. Often the use of these cosmetics will be sufficient to bypass the allergy but in some cases special formulas will have to be prepared. This is determined by the physician and the cosmetic manufacturer by various methods of investigation and testing. The diagnosis of a cosmetic allergy usually involves the following steps:

(1) A complete case history including how long the symptoms have been present, when they reoccur and when they disappear. Also what new products have been used and for how long.

(2) Elimination of suspected materials as determined by the case history. This period of elimination may be very trying to the patient but will prove of great value in discovering the offender and obtaining a suitable cosmetic. The cosmetics are eliminated entirely until the symptoms disappear. They are then reintroduced one product at a time. If the cosmetic can be used for a period of five days with no symptoms then another one is tried. This is continued until the symptoms reappear. When the offending product is discovered this is withdrawn until the symptoms disappear. It is then tried again as a final check.

(3) Patch tests (performed only by a physician) are sometimes of value in discovering the offender and this may be accomplished in a short period of time. The disadvantage of this method lies in the fact that there is a possibility that the sites used for patch testing (arm, chest or back) do not always respond to the material in the same manner as the site of application of the cosmetic.

(4) Direct testing with ingredients of the offending cosmetic on the site of irritation. This is done in much the same manner as the elimination tests. Special testing sets of the most widely used cosmetics have been prepared by some of the hypo-allergenic cosmetic companies for this type of testing and may be obtained by the physician.

In conclusion it can be said that no matter how difficult and involved a case of cosmetic allergy may appear to be there is always hope of finding a cosmetic, whether it be a regular product of a hypoallergenic cosmetic house or a special formula, that can be used with reasonable assurance of nonsensitization. The woman allergic to cosmetics today is indeed much more fortunate than she was two decades ago when her only alternative was to stop using cosmetics entirely. Today she can use them with as much pleasure and freedom of ill effect as the majority of women do. This is accom-

plished by the skill and knowledge of the doctor and the cooperation of the manufacturers of hypoallergenic cosmetics.

A.D.M.A.---Boca Raton

(*Continued from page 521*)

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rejections for safety (2 for sterility, 1 for pyrogens) and 11 for potency; 872 lots of 12 penicillin products tested by 19 companies which do not classify as prime producers were tested with no rejection for safety, and 3 for potency, 2 from one company in the first half of 1947, and one from another company in 1947; 15,752 lots of all products tested by 22 companies which are not prime producers, with 5 rejections of procaine penicillin in oil of one manufacturer in October to December 1948 for sterility, one rejection of penicillin in oil and wax for stability, and 29 rejections for potency, only one of which occurred since 1948. Breaking down these 15,752 lots, it was found that 4,262 lots of penicillin in oil were tested with 6 rejections for potency, but none in 1949. There were only 6 rejections for potency out of 3,918 lots of penicillin in oil and wax but none in 1949; 2,739 lots of tablets produced only 7 rejections for potency with none in 1949; 2,199 lots of troches yielded only 7 rejections for potency with only 1 in 1949; 1,281 lots of ointment yielded only 3 rejections for potency, all back in 1946.

There have been no rejections at any time of any lot from any manufacturer of penicillin suppositories, penicillin with sulfonamides, dental cones, penicillin for inhalation, or penicillin buffered powder, although 429 lots were submitted from 18 manufacturers.

Figuring from the fee for testing, it is estimated that for the 1,148 lots of prime products such as calcium, sodium, potassium, aluminum and procaine penicillin tested by the FDA during this period the fee cost was $1,103,969. Of those lots 21,148 lots, only 13 were rejected, giving an incidence of rejection of 0.061 per cent, and a fee cost per lot rejected of $84,921. For 16,935 lots of all other penicillin products tested the fee cost was $979,728 with only 5 lots of penicillin in wax rejected for sterility from one company in one quarter, giving an incidence of rejection of 0.0029 per cent, and a cost per rejection of $195,945.60. For the fiscal year 1949 from the annual report of the Federal Security Agency, there were tested 12,729 lots of penicillin products without a single rejection for safety reasons at a fee cost of $582,000.

With this situation in mind a bill has been drafted as a substitute for the present certification section of the Food, Drug, and Cosmetic Act, said Mr. Harrop. This bill was drafted by representatives of the American Pharmaceutical Manufacturers Association, the Proprietary Association, and the American Drug Manufacturers Association, and therefore can be said to be an all-industry bill. "This bill will reduce to a minimum the needless, useless, costly, duplicate assays that provide neither safety nor service for the public," said Mr. Harrop, who continued: "This bill is drafted so wholeheartedly in the public interest that it is difficult to see how any government official or agency could oppose it. If enacted into law, this bill can become the start of a new era of enlightened modern drug control. This industry and this Association should be justly proud of its part in preparing and offering legislation of this character."

 (Continued from page 565)

washed successively with 5 per cent sodium hydroxide, 2 per cent hydrochloric acid, and water. Upon distillation, 11 grams (88 per cent yield) of 2-p-menthyl carbinyl acetate were obtained.

Physical constants: B.P. 72-73°/1-3 mm, n_D^{30} 1.4495.

The patentees point out that the 2-p-menthane aldehydes may be replaced by other alkyl-substituted alicyclic aldehydes and that by selecting mixtures of these aldehydes it is possible to vary the odor and taste of the resulting alcohols and esters within rather wide limits. The patent also states that in place of the acetate ester other esters may be produced by substituting different fatty acids or alicyclic carboxylic acids for the acetic acid esterifying agent. However, as previously noted, the only new product covered by either of the patents is the acetate.

Estrogenics

Activity in this field continues, as evidenced by the recent issuance of two patents (U. S. 2,500,855 and U. S. 2,500,856) to Victor Niederl and Albert Bloom, the patents being assigned to Reed & Carnrick.

It will be recalled that the daddy of the synthetic estrogenes is diethylstilbestrol (alpha, alpha'-diethyl-4,4'-stilbenediol). U. S. 2,500,855 covers the saturated aliphatic carboxylic acid esters of 3,4 - bis - (m-methyl - p - hydroxyphenyl) hexane containing 2-4 carbon atoms in the carboxylic acid radicals. U. S. 2,500,856 is similar, covering saturated aliphatic carboxylic acid esters of 3,4-bis-(m-methyl-p-hydroxyphenyl) -2,4-hexadiene containing 2 to 4 carbon atoms in the carboxylic acid radicals.

Specific compounds covered by the patents include 3,4-bis-(m-methyl-p-acetoxyphenyl) hexane and 3,4-bis-(m-methyl-p-acetoxyphenyl)-2,4-hesadiene.

The patentees claim that their estrogenic compounds can be administered orally without observable toxic effect in doses which exceed many times their effective estrogenic doses. Further, the estrogenic potencies of the compounds are claimed to be considerably higher than that of estrone. Thus, whereas oral administration of 50 gammas of estrone produces only about 70 per cent estrus in ovariectomized rats, 3,4-bis-(m-methyl-p-propionoxyphenyl)-hexane produces 80 per cent estrus when given orally in 5 gamma doses, and the corresponding unsaturated compound produces 83 per cent estrus when given orally in 15 gamma doses.

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2,498,497—**Sterling Drug—Phthalimido Ethyl Pyridines.**

2,498,574 — **Merck — Dihydrostreptomycin.**

2,498,687—**D. H. Larsen—Vasoconstrictor.**

2,498,727—**Lanolin Plus Cosmetics—Isopropyl Palmitate Solution of Lanolin Cosmetic.**

2,498,849—**Wyeth—Rutin Extraction and Recovery.**

2,499,058—**G. D. Searle & Co.—8-Haloxanthine Salts of Substituted Amino Ethers.**

2,499,247-8—**G. D. Searle & Co.—Substituted Polyhydro - phenanthrene Lactone Derivatives.**

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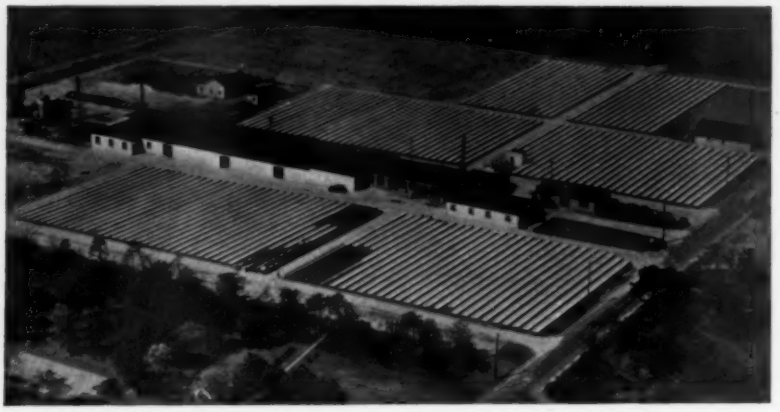

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Albek, Inc., Albert....578
Aluminum Company of America..Insert facing 532
American Cholesterol Products, Inc....566
American Alcolac Corp....579
Anchor-Hocking Glass Corp....Insert bet. 552-553
Anderson Bros. Mfg. Co....604
Arnold, Hoffman & Co....566
Aromatic Products, Inc....Insert facing 505

Baker Chemical Co., J. T....Insert facing 545
Baker & Adamson Products, General Chemical Div., Allied Chemical & Dye Corp. Insert facing 573
Beauty Fashion....540
Bridgeport Metal Goods Mfg. Co....570
Brown Bag Filling Machine Co....600
Burke Co., Edward S....605
Bush & Co., W. J....600

Calco Chemical Division....503
Calif. Fruit Growers Ex....Insert facing 565
Calumet Manufacturing Co., Inc....601
Camilli, Albert & Laloue, Inc....603
Carbide & Carbon Chemicals Div., Union Carbide & Carbon Corp....497
Carr-Lowrey Glass Co....536
Cavalla, Inc., A....609
Chemo-Puro Mfg. Corp....609
Chiris Co., Inc., Antoine....568
Colgate-Palmolive-Peet Co....611
Colton Company, Arthur....560
Cosmetries, Inc....606
Crown Cork Specialty Corp....541

Danco, Inc., Gerard J....583
Devold Oil Co., Inc., Peder....599
Distillation Products, Inc....507
Dodge & Olcott, Inc....Insert facing 576
Dow Chemical Co....Insert facing 504
Dunkel & Co., Inc., Paul A....570
du Pont de Nemours & Co., Inc., E. I. Insert bet. 504-505
Durlin Co....Insert facing 581

Ertel Engineering....601
Exact Weight Scale Co....562

Fairmount Chemical Co....611
Felton Chemical Co., Inc....Insert bet. 504-505
Firmenich & Co., Inc....Insert facing 577
Florasynth Labs., Inc....550
Foster-Forbes Glass Company...Insert facing 544
Fritzsche Brothers, Inc....Insert bet. 584-585

Gane & Ingram, Inc....603
Givaudan-Delawanna, Inc....Insert bet. 508-509
Glycerine Producers Assn....Insert facing 572
Greeff & Co., R. W....608
Gross & Company, A....502
Gunning & Gunning, Inc....593

Hazel-Atlas Glass Company....Insert facing 553
Heyden Chemical Corp....Insert facing 548
Hoffmann-La Roche, Inc....546; 586
Hormann & Co., F. R....603
Huisking & Co., Inc., Chas. L....599

Industrial Chemical Sales....Cover 2
Inland-Alkaloid Co....603
Innis-Speiden Company....Insert facing 501
Interstate Color Co....609
Ising Corp., C. E....609
Island Equipment Corp....602
Ivers-Lee Company....530

Jelly & Co., Walter H....605

Kelton Cosmetics Co....596
Kessler Chemical Co....571
Kimble Glass Div. of Owens-Illinois Glass Co....Insert facing 552
Kinetic Chemicals, Inc....Insert bet. 540-541
Klinker Mfg. Co....582
Kolar Laboratories, Inc....595
Kolmar Laboratories....Insert facing 500
Koster-Keunen Mfg. Co., Inc....612
Kraft Foods Company....594

Lautier Fils....553
Lueders & Co., George....Insert bet. 496-497
Lusteroid Container Co....574

Magnus, Mabee & Reynard, Inc....501
Mallinckrodt Chemical Works...Insert facing 509
Mateer & Co., G. Diehl....562
Mathieu, Inc., Charles....588
Merck & Co., Inc....500
Metalsmiths Div., Orange Roller Bearing Co...562
Metzgar Company....606
Michel & Company, Inc., M....611
Monsanto Chemical Co....Insert facing 496

Neumann, Buslee & Wolfe, Inc....604
New Jersey Machine Corp....Insert facing 556
New Jersey Zinc Co....575
Norda Essential Oil & Chemical..Insert facing 564

Orbis Products Corp....Insert facing 580
Owens-Illinois Glass Co....Insert bet. 540-541

Package Machinery Company....554
Pantone Press....608
Parsons Imports, M. W....571
Penick & Co., S. B....508
Pennsylvania Glass Products, Co., Inc....538
Perl Machine Mfg. Co....598
Pfaltz & Bauer Co., Inc....611
Pfizer & Co., Inc., Chas....Cover 4
Pittsburgh Lectrodryer Corp....558
Plax Corp. Div., Hartford-Empire Co. Insert facing 540
Pneumatic Scale Corp., Ltd....Insert bet. 540-541
Polak & Schwarz, Inc....Insert bet. 496-497
Potdevin Machine Co....563
Progressive Machine Works....611

Reheis Company, Inc....602
Richford Corp....583
Ritchie & Company, W. C....Insert bet. 540-541
Robinson Wagner Company....504
Roure-Dupont, Inc....506

Santonin Company of America, Inc....599
Schimmel & Co., Inc....542
Scoville Manufacturing Company..Insert facing 541
Seydel Chemical-Co....611
Sheffield Tube Corp....493
Standard Cap & Moulding Co., Inc. Insert facing 533
Standard Pharmacal Co....588
Sterwin Chemicals, Inc....495
Stokes Machine Co., F. J....Insert facing 557
Strong Cobb & Co., Inc....Insert facing 549
Sturge, Ltd., John & E....496
Swindell Bros., Inc....534
Synfleur Scientific Labs....Insert facing 508

Tamms Industries, Inc....611
Terkelsen Machine Co....563
Thurston & Braidich....607
Trade-Mark Record Book....588

Ungerer & Co., Inc....Cover 3
Union Carbide & Carbon Corp....497
U. S. Bottlers Machinery Co....563

van Ameringen-Haebler, Inc....Insert bet. 500-501
Verona Chemical Co....Insert facing 497
Vitamerican Oil Corporation....607

Welch, Holme & Clark, Inc....592
Will & Baumer Candle Co....505
Wolf & Co., Jacques....598
Woman's Day....498-499